

# THE STATE OF AGRICULTURE IN THE HUDSON VALLEY



GLYNWOOD



**FOR 15 YEARS**, Glynwood has been helping communities develop wisely and sustainably. Several years ago, recognizing that the primary concern of most communities was the loss of local farms, we began to focus on ensuring that farmers in the region would remain in business.

We have sought to protect and enhance farming in the region by marshalling good information that shows the positive impacts of farming, and by gathering data that illustrates the trends, challenges, and opportunities for farmers in the Hudson Valley. However, most often, we are confronted by a scarcity of such data on agriculture at the regional level.

In 2005, to address that lack of needed data, Glynwood compiled figures from the Census of Agriculture for the Hudson Valley region and published the first version of *The State of Agriculture in the Hudson Valley*. A wide range of people told us that they found it useful, including farmers, planners, policymakers, businesspeople—even the then-Commissioner of the New York State Department of Agriculture & Markets.

In 2010, we renewed and updated this effort by compiling county data from the most recent Census of Agriculture into a regional summary (data from 2007 was published in 2009), along with some additional figures from a few other sources that were particularly helpful. This report is the result.

**HUDSON VALLEY FARMS ARE** *essential small businesses that create jobs and enable local economies to thrive. Farms give us beloved scenic views, preserve the natural environment, and build community character.*

*And yet these same farms are struggling against a subsidized commodity-based system, industry consolidation, increasing costs of production, and a globalized marketplace that provides cheap food year-round. Even as the importance of “local food” has begun to resonate with many consumers, the call to help smaller, independent farms and farmers has become more insistent.*

*Farms in the region have the potential to provide more people with healthy, sustainable food. To do that, they need processing and manufacturing facilities, they need marketing assistance, they need better financing options, and they need communities that are friendly to farming.*

*If farming gets the attention it deserves and farmers are able to produce, natural resources will be preserved, wealth will be retained in the region, and residents will have a higher quality of life.*



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# THE HUDSON VALLEY REGION

## Land Cover

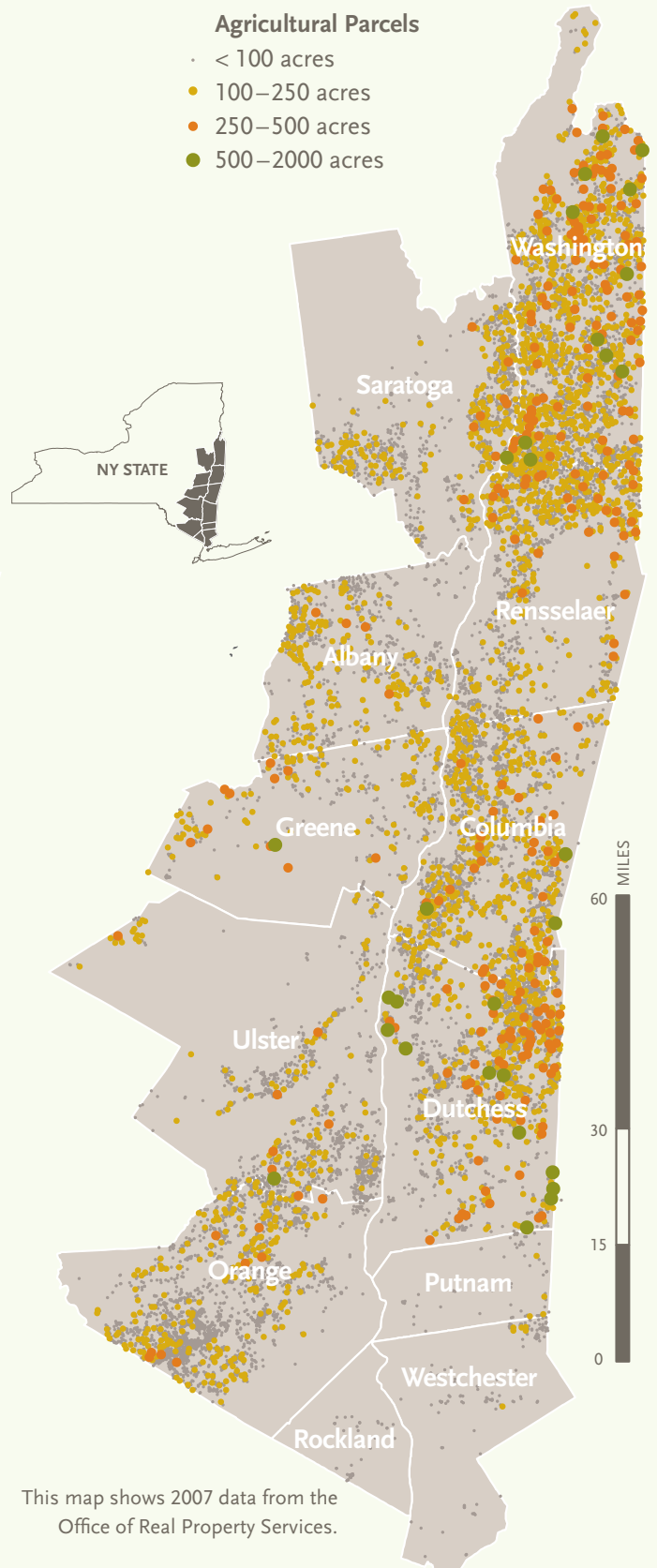
- Developed, High Intensity
- Developed, Low Intensity
- Developed, Open Space
- Cultivated Crops
- Pasture/Hay
- Forest/Grassland
- Wetland
- Water



This map shows 2006 Land Cover data from the NOAA Coastal Services Center.

## Agricultural Parcels

- < 100 acres
- 100–250 acres
- 250–500 acres
- 500–2000 acres



This map shows 2007 data from the Office of Real Property Services.

These maps were created with the Urban Design Lab at Columbia University, building on work begun by Dr. Cynthia Rosenzweig of the NASA Goddard Institute for Space Studies.

# HIGHLIGHTS FROM THE CENSUS DATA

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*The Hudson Valley region stretches for 200 miles, from Westchester northward past Albany towards the upper part of the Hudson River.*

## **In 2007 the region had:**

- ▶ 5,326 farms operating 1,325 square miles of farmland (equivalent to 17% of the region).
- ▶ Nearly \$4 billion invested by those farm businesses.
- ▶ A farm sector with a multiplier effect that resulted in a gross economic impact of \$810 million.
- ▶ Farmers who are independent business people: Nearly all of the region's farms were owned by families and individuals.
- ▶ More farmers, especially more women and younger farmers, and more small farms than in 2002.
- ▶ Average direct sales per farm that were 52% higher than the statewide average. And a 36% increase in the total value of direct sales since 2002.
- ▶ A 62% increase in farm-related income since 2002, with the greatest increase in revenue from agritourism.

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*And yet—agriculture in the Hudson Valley is in transition.*

## **From 2002 to 2007, agriculture in the Hudson Valley experienced:**

- ▶ A 3% drop in the number of farms, and a 10% loss in farmland acreage.
- ▶ A 21% loss in the number of farms with 500 acres or more, which represents two-thirds of overall farmland loss in the region. Many of these larger farms were probably dairies: dairy acreage declined by 27%.
- ▶ A 21% increase in the costs of production. Costs of doing business rose everywhere, but the Hudson Valley's proximity to urbanized areas makes farming more expensive here. In 2007, farmers in the region were contending with an expense-to-sales ratio of 94%, leaving them with a very narrow margin for profit.
- ▶ Fewer farmers reporting farming as their primary occupation. Most farmers in the Hudson Valley rely on off-farm income: In 2007, over half of Hudson Valley farms were "retirement" or "residential/lifestyle" farms, with an operator who had another occupation or who was retired.

◀ The dots on this map show agricultural parcels. These are parcels that are receiving an agricultural assessment, or that have been coded as agricultural by the tax assessors. Many farm businesses operate multiple parcels at one time (*see p.23*), which is why the number of parcels is greater than the number of farms. Data from the Office of Real Property Services (used to create this map) and data from the Census (the figures in this report), cannot be directly correlated because they are collected differently—but the two sources are nearly the same in terms of regional farmland acreage.

### **Farmland Acreage, 2007**

ORPS: 840,632

Census: 848,456

## A REGIONAL PERSPECTIVE

- **WITH THIS REPORT, we expanded our definition of the Hudson Valley region from 10 to 12 counties by adding Saratoga and Washington counties. This was in part driven by a desire to remain consistent with the Hudson River Valley Greenway Area's definition of the region (but excluding New York City), and also by the recognition that when the supportive services and infrastructure for farming weaken, the areas where agriculture is concentrated become increasingly interdependent. Farmers throughout the region benefit from the areas where agriculture is more dominant because in those places the necessary services and supplies are more readily available and more affordable.**

It makes sense to think about farming on a regional level because more than many other industries, conditions that affect farming operate at the regional level, such as: the availability of natural resources like land and water; climate and crop/livestock choices; availability of services; access to markets; transportation systems; land use and development patterns. A strong and resilient farm and food system (one that supports a diversity of farm operations and provides residents with diverse food) can operate efficiently at a regional scale.<sup>1</sup>

The Hudson Valley is an economic and agricultural entity. Considerations that relate to farming should be considered regional concerns. Zoning, planning and infrastructure development should not stop at the town or county line. Efforts to assess and support

farming in the Hudson Valley will be most effective if they operate at the regional level, and opportunities will arise as a result of thinking regionally (*see "Recommendations" on p.10*).

Also, a thriving food/farm network and a *regional identity* are mutually supportive. A strong sense of place—a regional identity—conveys a marketable sense of quality, adding value to products from that region. When the regional source is identified, consumers have the opportunity to use their food dollars to support local farmers. So the cultivation of a regional identity is a boon to farmers. Likewise, a sense of regional character is essential to tourism, regional development, and to our general quality of life—and none of those would fare as well without farms. **Farming gives the Hudson Valley its distinctive character.**

<sup>1</sup> Read more about a regional food systems approach: "It Takes a Region," Kathy Ruhf and Kate Clancy, NESAWG working draft, September 2010. <http://www.nefood.org/>

### THE HUDSON VALLEY IN THE CONTEXT OF NEW YORK STATE

For a dense region with large developed and suburbanized areas, the Hudson Valley has more farm activity than many people would assume. In 2007, 24% of the land in New York State was farmland. And despite a prevailing perception that all farming in the state occurs in the northern and western regions, the Hudson Valley was still 17% farmland in that same year.

#### Hudson Valley farming is a player within this large and agricultural state:

- 15% of NY State's farms are in the Hudson Valley
- 12% of NY State farmland is in the Hudson Valley
- 12% of NY State agricultural sales are from farms in the Hudson Valley
- 17% of NY State farms selling directly to consumers are in the Hudson Valley
- *but* those farms receive 33% of the value of all direct sales in NY State



# THE HUDSON VALLEY IN CONTEXT

- **THE STATE OF AGRICULTURE** in the Hudson Valley cannot be assessed without considering the region's location in a market that holds perhaps the strongest purchasing power in the country. Although such a context presents challenges for farming (like encroaching development), given the growth of a movement to support regional food, there is now an opportunity for stability—and even growth—in agriculture.

However, farmers and food entrepreneurs can only survive and grow if there is adequate infrastructure that will allow them to take advantage of this market. In addition to the businesses that farmers depend on to help them produce (like veterinarians, feed and fuel suppliers, and equipment repair services), farmers rely on services that help them get to market (like processors, aggregators, and distributors). Presently, that infrastructure is inadequate.

The state of transition occurring in farming in the Hudson Valley could be favorable for new kinds of ventures. With growing recognition that different kinds of enterprises can support farming, there are some innovative efforts suggesting that change for the better is underway.

## THE GROWTH OF A MOVEMENT

Recent years have seen an awakening to the importance of food and agriculture. The general public—and national media—are responding to the message that a consolidated, industrialized food system is detrimental to local economies, to natural resources, to public health, and to the quality of our food and our lives. The result has been a surge of interest in supporting regional, sustainable food systems that prioritize food quality, nutrition, environmental stewardship, and fair returns for farmers and farm workers.

Access to farm-fresh products is indeed increasing: The numbers of CSAs<sup>2</sup> and farmers markets have surged, and more mainstream distributors, retailers, and food service companies have begun to carry locally produced food. The central role of food in health—human, environmental, and community health—is being emphasized by educational projects across the country. More and more community groups are finding that food and farming are useful tools for empowerment.

Federal, state, and city governments have noticed and are responding. We have a White House garden, First Lady Michelle Obama is promoting healthy food and local produce, the USDA created a Food Atlas to give researchers access to food-related information, “Know

Your Farmer, Know Your Food” is a farm-to-plate initiative of the USDA, and farms are being included in the America's Great Outdoors initiative. New York State has a Food Policy Council, and New York City has become a leader and a hub of food-related advocacy: Within the past year, Manhattan Borough President Stinger released “Food NYC: Blueprint for a Sustainable Food System,” and City Council Speaker Christine Quinn released “Food Works New York,” a food system plan for the City of New York.

All of this activity creates a unique opportunity for farmers in the Hudson Valley. We are situated between two major metropolitan areas that offer rich policy arenas and robust markets. New York City is considered by many to be a global “food capital,” and many consumers in the New York metropolitan area are willing to pay more, if necessary, for high quality regional food. The diversity of markets in the region offers lucrative niche opportunities for farmers (as with Kosher and Halal meat). In 2005, the wholesale demand for locally produced food was estimated to be \$866 million annually,<sup>3</sup> and a wholesale market for regional farmers is now in motion. Other markets for regional producers, like Greenmarkets and the New Amsterdam Market in New York City, are demonstrating that the demand greatly exceeds current supply.

This groundswell in public and policy activity gives the Hudson Valley a critical foundation on which to build an effective, enduring regional food system.

2 CSA stands for Community Supported Agriculture, a “subscription” model in which members purchase a share of the farm's output for the season, receiving a box each week of freshly harvested produce.

3 “A Study on Development of New York City Wholesale Farmers Markets,” Karp Resources & Market Ventures, Inc., 2005.



## THE POWER OF FOOD DOLLARS

If residents in the Hudson Valley and in New York City spent just 10% of their food dollars on food produced in the region, the result would be tremendous: nearly \$4.5 billion in sales alone (before accounting for additional impacts). This is nearly 9 times higher than the yearly sales total of all farm products in the region, and suggests the immense potential every person—every eater—has to support a regionalized food system and encourage its growth.

The real total of food dollars spent in the region is even more than our calculation indicates, because the per capita food expenditure figure published by the Economic Research Service is a national average. The per capita figure for the Hudson Valley is likely much higher. One study<sup>6</sup> showed that Hudson Valley shoppers spend 37% more than the national average on food (both because they are inclined to purchase higher cost food like gourmet, organic, etc., and because costs are relatively higher in this region).

Residents of the Hudson Valley region are wealthier than the national and state average, with higher median and average household income, and higher per capita income.<sup>7</sup> With a market atmosphere like this, entrepreneurial agricultural enterprises in the region have great potential to succeed—if they have access to adequate off-farm services and efficient channels to get their products to market.

**Estimated resident  
population as of  
July 1, 2009<sup>4</sup>**

Hudson Valley Region 3,061,146

+

New York City 8,391,881

**11,453,027  
people**

**Per capita  
food expenditure  
for 2009<sup>5</sup>**

**X \$3,929  
per person**

**Estimated total of  
food dollars spent in  
the region in 2009**

**= \$44,998,943,083**

<sup>4</sup> US Census Bureau, Population Division.

<sup>5</sup> USDA, Economic Research Service.

<sup>6</sup> “Enhancing the Viability of Agriculture in the Hudson Valley: Insights Gained from Benchmarking Other Successful Regions,” prepared by Agricultural and Community Development Services with support from Glynwood, 2006.

<sup>7</sup> Ibid.





## GETTING TO MARKET

A study conducted in 2006 “benchmarked” the Hudson Valley against two other regions with strong agricultural economies and proximity to large consumer markets: the Bay Area in California and Southeastern Pennsylvania.<sup>8</sup> The report underscored the Hudson Valley region’s great asset: a consumer market that is “more ethnically diverse and wealthier than any other market in the country” with a high direct-to-consumer sales rate.

And yet, sales and profits for Hudson Valley farmers remain relatively weak in comparison. The study pointed to three major challenges for farmers in the Hudson Valley region: costs of doing business, access to land, and weak supply chains for regional farm products.

The study examined the relationships between links in the supply chain (agricultural production, processing, and marketing) and assessed the region’s capacity to link farmers with regional consumer demand. The conclusion was that the Hudson Valley had the weakest “production clusters” of all the regions studied, stating that “despite the large and vibrant food industry regionally, Hudson Valley agriculture is not well integrated into the processing and distribution infrastructure needed to take its produce to market.”

This absence of infrastructure is the greatest impediment to farm viability. A food system, like an ecosystem, is a living network—anchored by farmers who depend on a vital system of accessible supports: veterinarians, feed and fuel suppliers, equipment repair services, processors, distributors, markets.

When the support infrastructure deteriorates, costs go up for farmers. In a region like this, where costs of production are already high, this is a significant risk. The same benchmarking study (using data from 2002) showed that the cost of doing business in the Hudson Valley was much higher when compared to the other regions. Our analysis of Census data from 2007 shows this has remained true (*see p.30*).

Preserving and rebuilding farm infrastructure will not only keep farmers in business, it will create jobs, invigorate the regional economy, increase the availability of healthy food, and enhance the myriad other public benefits that farming brings to this region.

A study from 2001 examining the impacts of agriculture in New York State said that food manufacturing has one of the highest employment multipliers of any industry in the State.<sup>9</sup>

8 “Enhancing the Viability of Agriculture in the Hudson Valley: Insights Gained from Benchmarking Other Successful Regions,” prepared by Agricultural and Community Development Services with support from Glynwood, 2006.

9 “Agriculture-Based Economic Development: Trends and Prospects for New York,” Nelson L. Bills, Cornell University, 2001.



## INNOVATION

The good news is that there are successful ventures that have found creative ways to bring distinctive regional products to market, and they are rebuilding much-needed infrastructure as they do so. Several notable successes have emerged from the Hudson Valley, and they are setting the stage for expanded entrepreneurship in the region.

### **PAMPERED COW: *Connecting the dots***

Matthew Scott saw a need: farmstead cheesemakers in the Hudson Valley were not able to efficiently get their products to buyers. At the same time, refrigerated trucks of large distribution companies were crisscrossing the region, often empty. Heeding the advice of a branding expert to “build relationships not bricks-and-mortar,” Scott launched Pampered Cow, an aggregation service that pulls together local products and links up with distributors, who then carry the inventory to buyers. The service also represents the products to attract new buyers, and ensures that the producers get paid on time.

It has worked: Since the company’s inception in 2007, they have doubled their sales every year. They expect to surpass \$1 million in sales in 2011, with products now reaching customers nationally. In addition to providing a solution for sales and distribution, the venture is making cheese at their own creamery, Twin Maple Farm, where they also help to incubate new cheesemakers.

### **FARM TO TABLE CO-PACKERS: *Adapting existing infrastructure, and extending the season***

Smaller scale, independent produce growers are in need of processing infrastructure to preserve fresh food during the growing season and to create value-added products. Farm to Table Co-Packers transformed the central kitchen of a former IBM facility into a processing center that is intended to serve these growers. Luc Roels and Jim Hyland, the entrepreneurs behind the facility, have now equipped it to can, jar, pickle, freeze, bake, and more. An incubator kitchen is in the works to help producers create new value-added products with regional produce.

In the first few months of operation, Farm to Table Co-Packers worked with over 25 farms. They have produced value-added products directly for farms, including pesto, tomato sauces, pickles and frozen vegetables. They have also found large outlets for local produce. For example, they froze over 50,000 pounds of locally grown tomatoes for a regional salsa company. A newly added nitrogen IQF (Individually Quick Frozen) freezer will allow area farms to sell their vegetables frozen at an industry standard—an opportunity not previously available to many local growers. Frozen local produce is now being sold to regional colleges and schools. Such institutions have become more and more interested in serving locally grown food, and the ability to serve these markets can offer farmers significant growth opportunities.

### **HUDSON VALLEY FRESH: *Higher value for dairy***

Dairy farmers have been desperately in need of an alternative to the commodity system, and Hudson Valley Fresh has created a successful one. Here’s how it works: participating local dairies agree to follow strict standards of quality that are higher than industry norms. They collectively process and market their premium locally-produced milk to regional retailers. The processing facility only processes Hudson Valley Fresh milk, and all the farms are located near the processor.

Hudson Valley fresh has estimated production costs for their dairy farmers to be \$1.65 per gallon. At a time when commodity prices can get as low as \$1.05 per gallon, Hudson Valley Fresh pays the farmer \$1.90 per gallon. With an avid following among consumers in the region, Hudson Valley Fresh has succeeded in creating a business that pays dairy farmers a fair price. The family farms that currently provide milk to Hudson Valley Fresh occupy 5,000 acres of open space. Expansion of the business is on the horizon, with the addition of yogurt, cream cheese, and premium ice cream.

### **MODULAR HARVEST SYSTEM™:**

#### ***Innovative meat processing facility***

The climate, topography, and soils of the Hudson Valley create ideal pastures for raising livestock on grass and producing high-quality meat. In the same region, there is a strong market demand for regional, pastured meat. And yet, producers could not get their meat to market efficiently without an accessible, USDA-licensed slaughterhouse. Industry consolidation has led to the disappearance of many of the slaughterhouses that once served small and mid-scale independent operations. So producers here—who are generally independent farmers, most often small and mid-scale—have been hindered. Without adequate processors, they cannot profit by selling high-quality meat, despite the existence of an eager market.

In 2010, as a result of Glynwood’s Slaughterhouse Initiative, an innovative new facility was launched. It is the first USDA-licensed mobile unit for large livestock in the northeast, and the only modular, mobile unit of its kind. It will operate at a series of docking sites that are being established, rotating throughout the region to increase the capacity available to all farmers. The anticipated result is that a greater number of producers of high-quality meat will be able to bring that product to market, increasing both the availability of this meat and the viability of these farmers.

### **TUTHILLTOWN SPIRITS:**

#### ***Making spirits an agricultural industry***

A distilled spirit can increase the value of the fruit or vegetable used in its creation by as much as 800%.<sup>10</sup> Several years ago, reduced permit fees created an opening for micro-distilleries in New York, and Tuthilltown Spirits, in the heart of the Hudson Valley, became the State’s first legal whiskey distillery since Prohibition. Tuthilltown is converting local fruits and grains to high-value products in the form of vodka and whiskey, and by doing so these entrepreneurs are building spirits into an agricultural industry. Their “Hudson” brand has met with enormous success, and is now owned by a prominent Scottish distiller (W. Grant & Sons, maker of Glenfiddich), reaching worldwide markets and carrying the identity of the Hudson Valley with it. The first such acquisition of its kind (an international whiskey house purchasing an American craft brand), this is considered to be a significant recognition of American craft distilling. Tuthilltown continues to make the Hudson brand whiskeys, along with other spirits, and maintains a commitment to using regional produce.

### **RONDOUT VALLEY GROWERS ASSOCIATION:**

#### ***Collective marketing***

In a region of multiple smaller and independent farm producers with a strong market for direct sales, one might assume that fierce competition is their strategy for success. However, growers in the Rondout Valley in Ulster County have shown that a competitive advantage can come from working together. Farmers in this fertile area of the Hudson Valley recognized their vulnerability to developers and increasing numbers of second home owners. They responded by creating a community-wide agricultural collective and a brand for the identity of the Rondout Valley region. They felt that for local producers to compete with the globalized marketplace, consumers needed to associate the Rondout Valley region with a sense of quality. A brand name was established and is used to market the products of all participating farms in the local communities. The Rondout Valley brand could serve as a smaller scale model for a broader Hudson Valley identity, one that would resonate for people within and far beyond the region.

The Rondout Valley Growers Association is also engaged in community outreach to cultivate support for farmers, as well as educational programming. Their Farm to School program works with area schools to bring healthy food into cafeterias and to incorporate agriculture into classroom lessons. A Farm to Pantry program coordinates gleaned produce from growers and distributes it to food pantries and soup kitchens. In the past year, more than 47,000 pounds of food were donated.

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<sup>10</sup> Based on an estimate provided by Ralph Erenzo of Tuthilltown Spirits.





# RECOMMENDATIONS: SUPPORT THE BUSINESS OF FARMING

- The business of farming persists in the Hudson Valley, despite the challenges of farming in a region with strong development pressure. Sectors that were once strong are declining in most of the region (dairy in particular), and critical farm infrastructure has weakened. In response, farmers are diversifying, transitioning, and trying to find their way to new markets. There are encouraging trends: more small farms, new entry farmers, and greater diversification in farm production.

The region will be stronger, wealthier, and healthier if farming remains and flourishes. The range of actions required to make this happen will call upon the skills, energy, resources and resolve of us all—private individuals, nonprofits, business enterprises, and government agencies at all levels.

While the Census data reveals challenges faced by farmers in the region, it also points toward the following opportunities to support the business of farming.



## LEVERAGE THE EXISTING INVESTMENT

*Farmers in the Hudson Valley have collectively invested over \$4 billion in farming, in the form of land, buildings, equipment, and machinery. This investment generates economic activity with a powerful multiplier effect that reverberates throughout the regional economy.*

- Policymakers should recognize farming as a critical force in the region's economy. State and local economic development staff, funding, and other resources should be focused on leveraging the existing investment in farming.

## SUPPORT NEW FARMERS AND FOOD ENTREPRENEURS

*For farming to continue and to grow, new farmers need help gaining entry, experienced farmers need support expanding their operations and/or transitioning to higher value products, and food entrepreneurs need to thrive.*

- Nonprofit organizations and government agencies must provide the guidance and technical assistance that new and transitioning farmers need.
- Banks, government agencies, philanthropists and social venture capitalists must ensure that farmers and food-related entrepreneurs can access adequate capital, whether through affordable loans or creative financing options.



## PROTECT LAND AND MAKE IT ACCESSIBLE TO FARMERS

*Being near New York City provides a strong market for regional food. It also results in high land values based on residential use rather than food production.*

- ▶ Individual landowners, land trusts, and government agencies must develop new ways to work together to:
  - Protect more agricultural land from development;
  - Help farmers gain access to land, as owners or as long-term tenants and managers;
  - Expand the region's agricultural base—and realize its productive potential—by bringing appropriate land back into farming.

## RETAIN AND REBUILD INFRASTRUCTURE

*Most farms in the Hudson Valley are independent operations that rely on a system of other off-farm businesses (including equipment dealers, repair shops, feed and fuel suppliers, large animal vets, value-added processors, distributors, and markets). These essential services will only be preserved—and recreated where necessary—if the region's farming sector is strong.*

- ▶ In regions with strong agricultural economies, farm-related businesses are “clustered” around each type of farming—meaning that they are well-linked along the supply chain. For example, a “cluster” around meat production would have livestock farms; service providers like large animal vets; processing facilities for slaughter, cutting, and aging; services to produce value-added products like sausages and cured meats; and butcher shops, markets, and other retail outlets. Investment from all sectors must be targeted toward creating such “clusters” of farm related businesses.
- ▶ Community support is also a form of infrastructure, the importance of which should not be overlooked. At the community level, a better understanding of agriculture's importance provides a critical constituency that will help to sustain farming over the long term. Residents, planners, and local leaders should engage their communities in building support for farming.\*

## CAPTURE USEFUL DATA

*For too long, farming has been the region's “invisible economy” and has not received the support it deserves. In part, this is because the data collected by the USDA and others does not “fit” the type of farming in the Hudson Valley.*

- ▶ Government agencies and others should redesign their questions and surveys to capture data that is more relevant to farming in this region and other regions like ours.
- ▶ In lieu of relying solely on data from the Census or other government sources, interested citizens at the local level should take action to develop a thorough and widely shared understanding of agriculture's importance.\*

## BUILD A REGIONAL IDENTITY

*Consumers tend to be willing to pay a premium for food products from regions with strong identities, giving that region's farms a competitive advantage. This is a natural opportunity for the Hudson Valley, where the working landscape has long been a central part of its distinctive and special character.*

- ▶ To create a regional identity around food, producers need to meet high standards of quality, the region's name needs to be prominently featured in the marketing of high-quality regional food, and the Hudson Valley must be promoted as a world-class landscape producing world-class food. Farmers, other individuals, and organizations throughout the region should take every opportunity to build a stronger regional identity for the Hudson Valley, one with food and farming at its heart.

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\* Glynwood's Keep Farming® program provides the tools to build community-level understanding of farming, leading to an informed constituency that will take action to sustain farming in their community.







# THE STATE OF AGRICULTURE IN THE HUDSON VALLEY THE DATA\*

\* Compiled from the Census of Agriculture.



# FARMS

15% of New York State's farms are in the Hudson Valley region.

## Hudson Valley Farms

1997: 5,457

2002: 5,467

2007: 5,326

- As we reviewed these farm numbers with colleagues, there was a universal sense that they are too high. This is certainly due to the Census definition of “farm.” Because of the minimal criteria for entering the Census (\$1,000 or more in sales or potential sales), the Census captures different kinds of farming operations, including many that might not fit the typical image of a farm: smaller operations with lower sales that may not be visible on the landscape, and newer ventures not yet fully established.

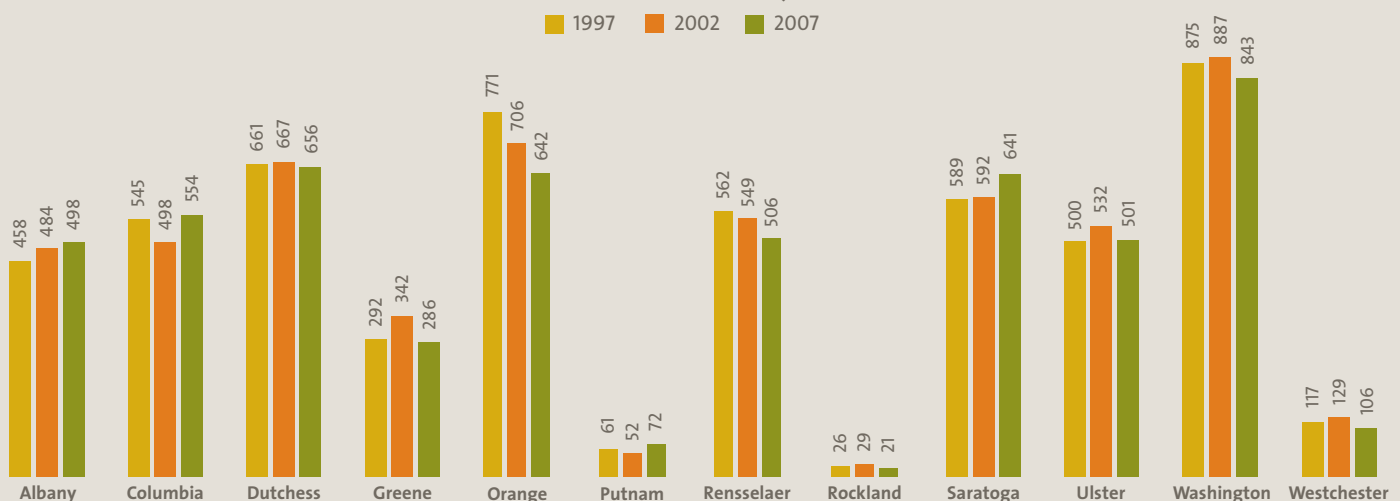
Many of these operations with lower sales are probably not doing enough business to support the livelihood of a farmer, and therefore may not be well known in the agricultural community. Nevertheless, small producers still play an important role by keeping land in production and participating in the agricultural economy by buying materials and requiring services.

In 2002, the Census definition of a “farm” had been expanded to include more horse farms and Christmas tree farms, causing the farm numbers and farmland acreage totals from the Census to appear to *increase*

from 1997 to 2002. In fact, the number of farms did not likely increase during that time—rather, the Census captured information from more operations, especially the newly included horse farms. The greater inclusion of horse farms has a visible impact on the data for this region because horse operations are prevalent here: the Hudson Valley has the top three highest-ranking counties in the State for sales of horses (Dutchess, Columbia, and Westchester), and the number one county for inventory of horses (Dutchess).

From 2002 to 2007, the total number of farms in the Hudson Valley region appears to have dropped by about 3%. But since the data increasingly includes non-food producing operations, this slight drop in farm numbers from 2002 to 2007 is likely masking a greater loss in farms that produce food for people.

## HUDSON VALLEY FARMS, 1997–2007



# FARMLAND

*There is a need—and an opportunity—to sustain productive farmland.*

## Hudson Valley Farmland

1997: 927,276 acres

2002: 941,743 acres

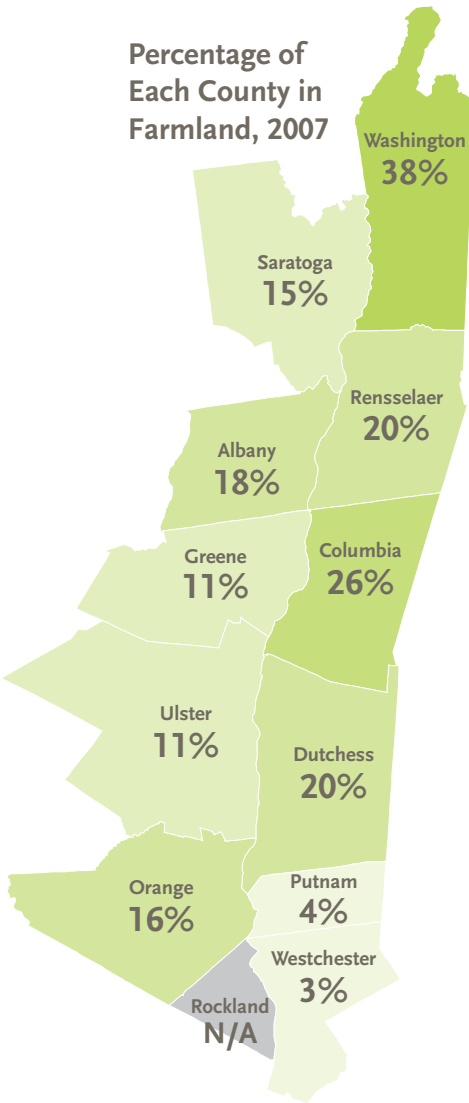
2007: 848,456 acres

- In 2007, 17% of the region was farmland—equivalent to 1,325 square miles. From 2002 to 2007, farmland acreage decreased by 10%.

Still, in light of the strong development pressure and rising land prices in the Hudson Valley region during this period, a more rapid loss of land in agricultural use might have been expected. The fact that land was retained for agricultural use may be due, at least in part, to the active farmland protection efforts undertaken by land trusts, counties, municipalities, and the State of New York.

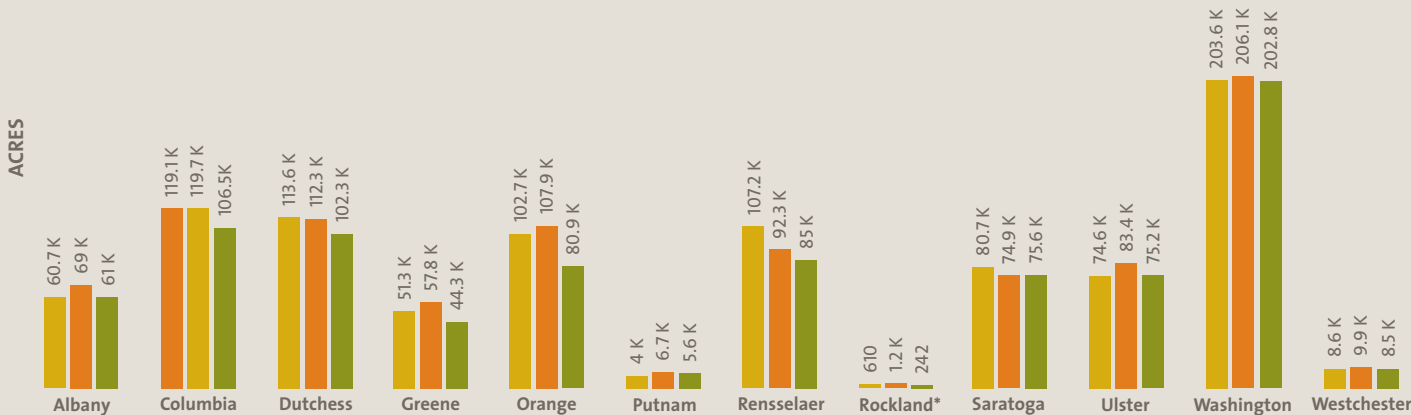
Since 2007, development pressure has slowed due to the overall economic downturn and in some areas the price of farmland has declined as a result. The challenge is that just when the cost of protecting farmland declines, so does the availability of acquisition funding, making it difficult to take advantage of this opportunity.

In some parts of the region, especially in areas with a high proportion of second home owners, land has retained its value. In these areas, land under easement can actually appreciate in value—posing a formidable obstacle to farmers seeking entry or expansion.



## FARMLAND IN THE HUDSON VALLEY

■ 1997 ■ 2002 ■ 2007



\* We have estimated acreage for Rockland in 2002 and 2007

## LAND USE

*The Hudson Valley has long been a fertile region with a diversity of farmland. It has the potential to produce even more food for the region's consumers.*

- The Census numbers tell us there are 1,325 square miles being actively farmed in the Hudson Valley—but there is potential for even more agricultural activity.

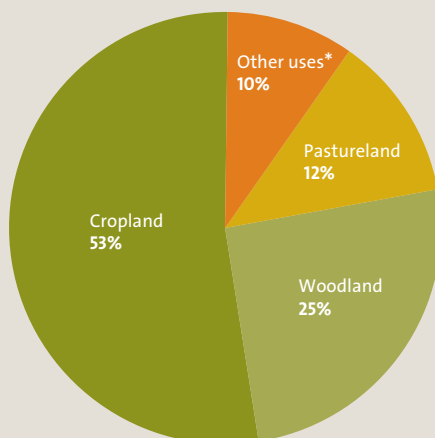
Farmland is not only lost to development but may also be lost to overgrowth when it falls out of cultivation. Throughout the Hudson Valley, one can see expanses of brush and second-growth forests. Many of these were once productive fields; oftentimes an overgrown stone wall is the clue to its previous usage. Once brush and invasive species take over, it's expensive and difficult to reclaim land for agriculture, and the longer that land goes unmanaged, the harder it is to clear. If a viable agricultural economy is to be maintained, land that's currently being farmed must stay in production—and steps should be taken to revive the agricultural potential of the region.

More land could be returned to farming, but farmers need to be able to get their products to market. Some farmland isn't in production because farmers are not assured that they can do so. For example, many livestock producers would like to expand production to meet the growing market demand for high-quality pastured meat, but they are hindered by a lack of processing facilities.<sup>1</sup> Infrastructure that connects farmers to markets is critical for farmers to grow their businesses and their farms.

*Tax assessors use a coding system to describe the characteristics of every parcel of land. Though not a perfectly precise system (interpretation of the codes can vary by assessor), it is the best inventory available for land on a regional level. We used this data to create the map on p.2, which shows agricultural activity. We also examined different codes describing land that was previously agricultural, but is not currently in production. And we found a total of 172,718 such acres in the region in 2009 (only slightly less than what it was in 2007). That is equivalent to 20% of the regional farmland acreage figures, suggesting significant additional potential production.*

<sup>1</sup> The Modular Harvest System™, a USDA-licensed mobile slaughterhouse launched by Glynwood during 2010, has begun to answer this need.

FARMLAND USE, 2007



53% of farmland in the region is used for crops, but this is largely to grow grain and hay that feeds animals, as opposed to vegetables. Though some of it will feed horses, it is also grown to feed dairy and meat animals that provide food to people.

The percentages shown here for regional farmland use are also consistent within each county.

\* "Other uses" include farmsteads, buildings, ponds, roads, wasteland, etc.



# AGRICULTURAL PRODUCTION

*With land and climate that are suitable for a range of farming, the region produces a great diversity of products.*

- Farming in the Hudson Valley is distinguished by a great diversity of production. Though farms in the region may be small when compared to farms in many other regions, the farming culture here is unusually rich and varied. Farming in the Hudson Valley spans all agricultural sectors, and the region boasts a high number of diversified farms.

While the Census shows the range of products that are grown here, it doesn't show the full extent of farm diversification. That is because the Census classifies farms according to their principal sales: the category that represents 50% or more of their sales.<sup>1</sup> It's a useful way to get a sense of the presence of different agricultural sectors in the region, but it's not an ideal scheme for understanding the true diversity of farming in the region because so many farms produce multiple things. Farms that do not have 50% or more of sales in one clear category (for example a farm that sells vegetables, poultry, and fruit) will be filed in either "Other Crop" or "Other Animals." We suspect that this is one reason why the "Other" categories are so high in the Hudson Valley (FIG 1).

Another reason these "Other" categories show a high number of farms is probably due to the prevalence of horse and hay operations (hay production is included in "Other Crop Farming" and equine operations in "Other Animal Production"). Hay production is strong because of demand from horse and other livestock farms, and dairy farms that are unable to continue producing milk may continue to produce hay. Further, some non-farming landowners who wish to qualify for the agricultural tax exemption lease their land to a farmer for cutting hay.

The decline in Greenhouse operations (FIG 1) is very likely due to competition from "big box stores," which are increasingly dominating the nursery retail market—not only taking sales from local nurseries, but bringing potential for disastrous plant diseases that can spread to nearby gardens and farms, as with the early appearance of late blight in 2009.<sup>2</sup>

The drop in value for fruit in 2002 (FIG 2) is certainly due to poor weather conditions that year, which caused low yields—one orchardist reported that his trees yielded only about 6% of the yield of a normal year. Vegetable crops were less affected because many could be planted after the damaging frosts.

The higher value of dairy (FIG 2) is due in part to the fact that milk prices were low in 2002 and high in 2007, but it could also reflect increased value-added production such as cheese and yogurt. Though this recovery in dairy product sales may appear encouraging, the loss in dairy acreage tells more of the story. Dairy farms are extremely vulnerable to fluctuations in milk prices, and many have been unable to stay afloat when milk prices drop below the cost of production.<sup>3</sup> From 1997 to 2007, the Hudson Valley lost 39% of its dairy farms and dairy acreage declined by 27% (FIG 3). From 2002 to 2007, 53% of all the farmland lost in the region was in dairy.

*The Census of Agriculture is not constructed to capture sufficiently detailed data on the kind of diversified, independent, smaller farms that exist in the Hudson Valley region. Rather, the Census appears to be more geared towards large-scale commodity farms. Better information is needed. See our discussion of the need for better data on p.39.*

- 1 The Census uses the North American Industry Classification System (NAICS).
- 2 Glynwood spoke to William Fry, Professor of Plant Pathology and Plant-Microbe Biology at Cornell University, who confirmed that the early appearance of late blight in 2009 was associated with a large tomato transplant dealer with consignments in "big box" stores. Infected transplants purchased at these stores were then planted in home gardens, causing the rapid spread of late blight to farms and gardens throughout the Northeast, destroying many tomato crops.
- 3 See State Comptroller DiNapoli's publication "New York's Dairy Industry in Crisis," March 2010.

# PRINCIPAL PRODUCTION, 1997–2007

1997  
2002  
2007

FIG 1

## FARMS

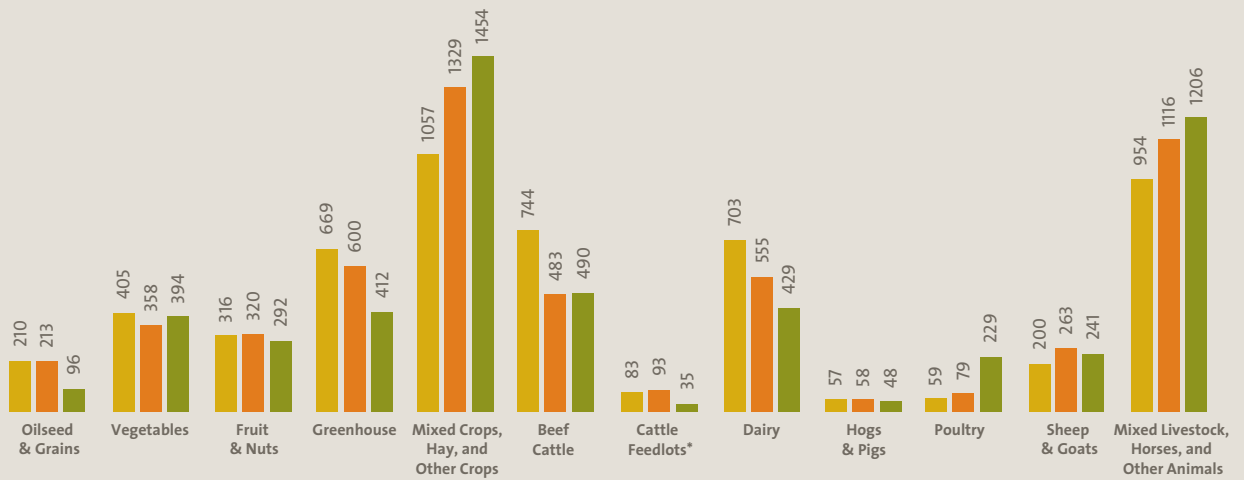


FIG 2

## SALES (IN DOLLARS)

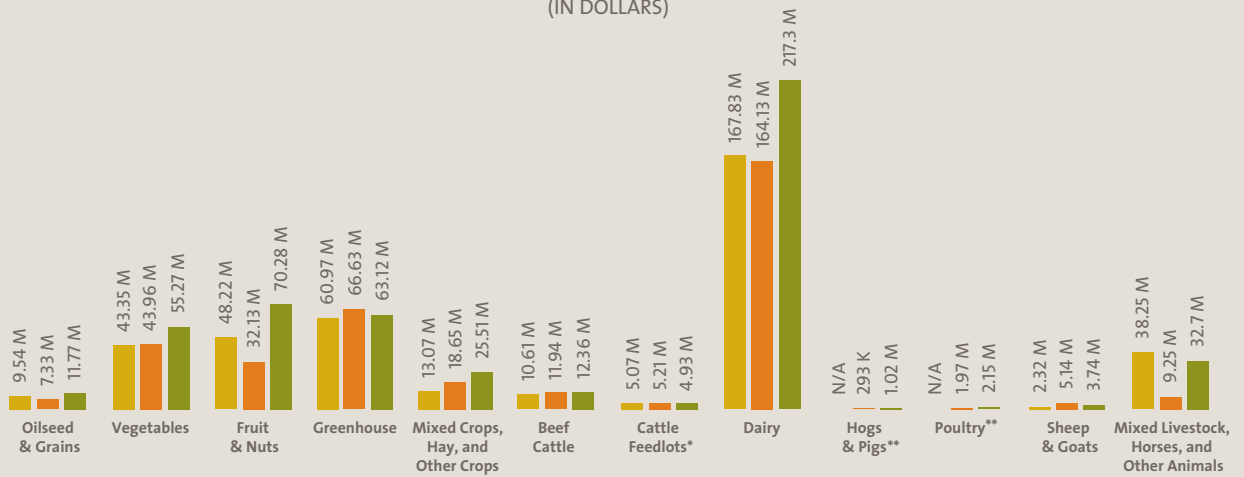
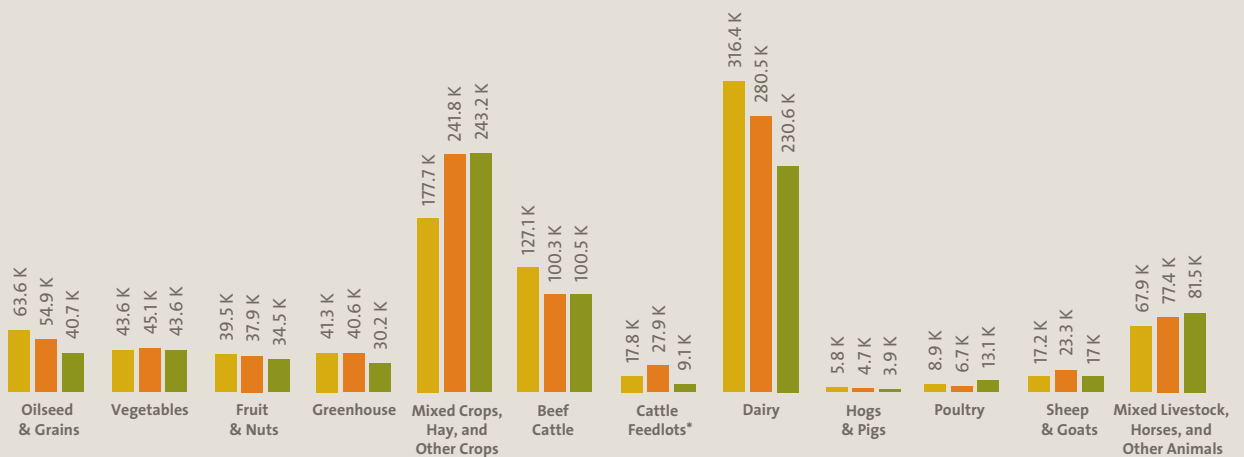


FIG 3

## ACREAGE



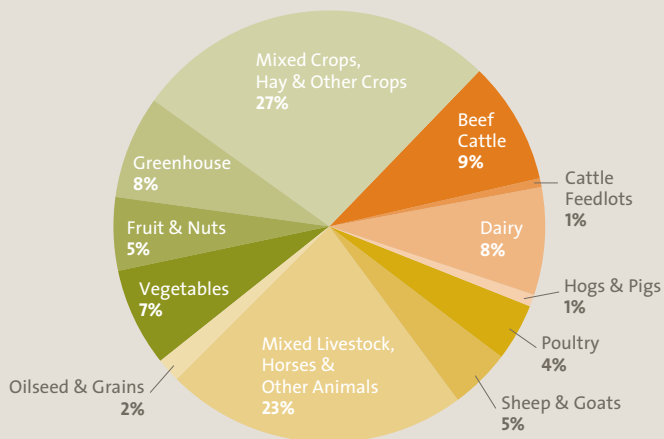
Because of undisclosed county-level figures for sales and acreage in the published Census, we requested regional-level data for these charts, combining all 12 counties into one summary. This request was filled directly by the NASS Data Lab.

\* The Census defines cattle feedlots as “establishments primarily engaged in feeding cattle for fattening.”

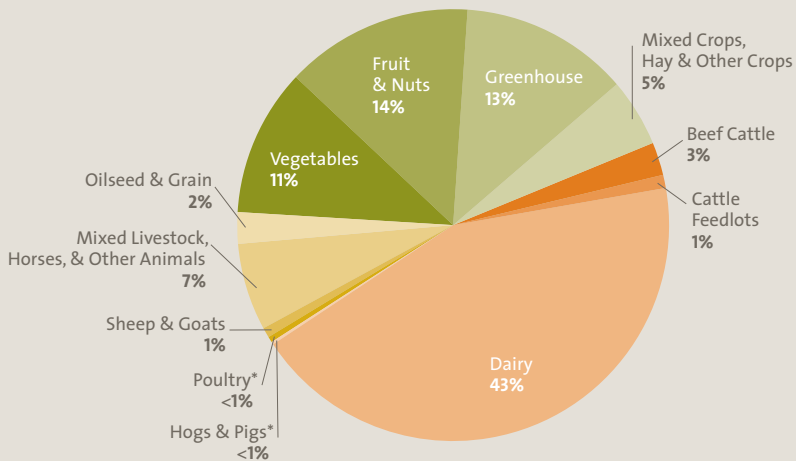
\*\* We have estimated sales of hogs and poultry by looking at available Census data.

## PRINCIPAL PRODUCTION, 2007

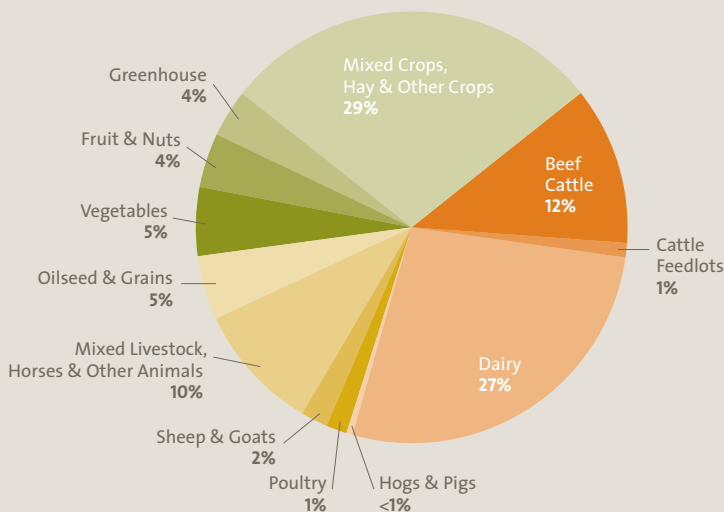
### FARMS



### SALES



### ACREAGE



A comparison of farm numbers to acreage and sales by production sector in one year, 2007, suggests how different agricultural sectors actually function in the region:

Although there would seem to be a number of beef farms occupying material acreage, their share of sales is quite small. We know that livestock producers have been challenged by a lack of processing infrastructure, making it difficult for many of them to get their products to market, which restricts how much they can produce. The continuing presence of beef production in both farm numbers and acreage indicates that there is potential for this sector to expand if there is adequate infrastructure.

There are a fair number of poultry farms, but with smaller acreage and sales, suggesting that many of these may be “backyard” small flocks.

Fruit and vegetable producers may seem to be smaller players in terms of farm numbers and acreage—but their substantial share of sales shows their significance. Similarly, greenhouse nurseries, though they don’t require substantial acreage, get high value in sales of their products.

The dominance of hay in “Other Crops” is suggested by the fact that a quarter of the region’s farms are in this category, occupying nearly a third of all regional farmland, but reflecting only a small proportion of sales. This is most likely because many farms are making hay for their own use.

The biggest story here is dairy. While the number of dairy farms might appear to be comparatively equal to or less than other sectors, dairy acreage is extensive (nearly a third of all farmland) and dairy’s sizeable share of sales (almost half of total regional farm sales) reflects its critical importance to the region’s agricultural economy.

*Appendix A, p.34, shows the number of farms in each sector by county.*

\* We have estimated sales of hogs and poultry by looking at available Census data.





## A FOCUS ON DAIRY

New York State has the third highest dairy sales in the nation, and dairy is an industry that has long been central to agriculture in the Hudson Valley. But challenges for dairy farmers continue to mount. Low commodity milk prices in tandem with rising costs of production have led to a tremendous loss of dairy farms in the Hudson Valley: From 1997 to 2007, the number of dairy farms in the region declined by 39%, with a concurrent 27% loss of dairy acreage.

Low milk prices have certainly caused many dairy farms to go out of business, and though milk prices were up in 2007, since then we have seen dairy prices sink to historically low levels. The commodity pricing system can leave farmers in the lurch—paying more to produce milk than they can get paid for it. Many farmers still have not recovered from 2009, when the price of milk dropped severely low.

*“Statewide, dairy farms reported losses of \$700 million for 2009. ...the decline from 2007 to 2009 was the most drastic drop in milk prices ever.” — NYS Comptroller DiNapoli*

Dairy farms are the cornerstones of agriculture in our region. Dairy helps to support the necessary infrastructure for farmers in other sectors, whether they produce fruits, vegetables, poultry, or meat. When dairy farms are lost, the infrastructure is weakened overall, making it harder for *all* farmers to do business. Dairy farming also has a strong economic “ripple effect” and a high employment multiplier, creating jobs both on and off the farm (in processing, distribution, marketing, etc.). The loss of a dairy farm—or any farm, for that matter—represents a loss to the entire community.

Fifty-three percent (53%) of all the farmland lost in the region from 2002 to 2007 was in dairy. What will happen to that land? Though these dairy farms may be vulnerable, they also have potential to transition in such a way that they remain viable. Those of us working to strengthen regional agriculture should be thinking about how to help those dairy farms that need support to shift out of the commodity system and into other sectors, or into higher value dairy production, such as regionally branded milk or cheese.

An encouraging trend is the growth in small dairies producing premium dairy products. Since 2007, the number of small dairy plants in New York State almost doubled, including a 55% increase in the Hudson Valley. Currently (in 2010), one third of all the small dairy plants in New York State are in the Hudson Valley, a large proportion given the size of the State.<sup>1</sup>

### SUCCESSES IN THE HUDSON VALLEY

Hudson Valley Fresh is an effort that has found enormous success by processing and marketing high-quality milk outside of the commodity system (*see p. 8*). Battenkill Valley Creamery built a facility to process and bottle their milk on the farm, and offers a home delivery program. Ronnybrook Farm Dairy is a popular vendor at New York City’s Greenmarkets, in addition to being carried by many retailers, and it has found a niche with yogurt and other products. Bellvale Farms diversified to add some vegetable production and agritourism activities, in addition to making ice cream that is sold at a family-run retail location.

<sup>1</sup> Small plants data from NYS Department of Agriculture and Markets, Milk Control and Dairy Services.

# FARM SIZE

*The Hudson Valley region is dominated by small and mid-size farms. Though larger farms are being lost, there are an increasing number of smaller farms.*

- In 2007, 42% of Hudson Valley farms were smaller than 50 acres and 7% were larger than 500 acres. The average farm size was 159 acres<sup>1</sup> (smaller than the New York state average of 197 acres, and less than half of the national average farm size of 418 acres).

These statistics skew toward smaller farms because of the Census definition of “farm.” However, we are seeing more small farms emerging in the region, often as new ventures dedicated to making locally-grown food available to consumers. And they have increasing opportunities to do so, through direct sales and specialized regional distribution channels.

While the number of farms smaller than 50 acres grew by 4% from 2002 to 2007, the number of farms larger than 500 acres decreased by 21%. The potential loss of that acreage represents at least two-thirds of the total regional loss of farmland. Although the disappearance of farms in these larger size categories may not represent a loss of that acreage (there may be portions in transition or operations that have downsized), many farms of this size are dairy operations—which have indeed been severely challenged.

Growth in the number of small farms is encouraging, but larger farms are still the anchors to the agricultural system. Larger farms not only manage more land, they keep crucial support infrastructure going.

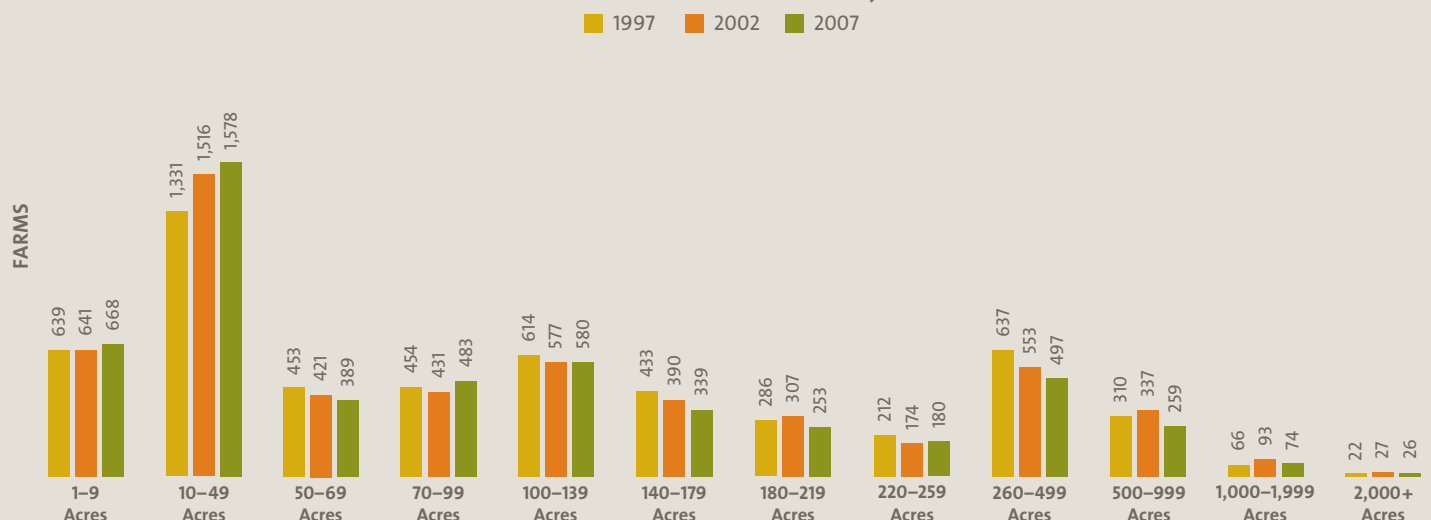
When established farms cease to operate, their suppliers and service providers also suffer. If those support businesses can’t keep going, farming becomes even harder and more expensive for remaining farmers in the area.

*For example, in Putnam County, where Glynwood Farm is located, there are few farm-related suppliers and service providers. This results in increased costs and complexity. Feed can only be purchased locally in bags. It is more affordable and efficient to purchase it in bulk, but that requires driving nearly two hours—burning fuel and using valuable time. Similarly, the farm is two hours from a tractor dealership, making it harder to schedule onsite repairs and requiring the farm to pay for a mechanic’s travel time.*

See further discussion of farm size in the “Farm Typology” section, p.28.

<sup>1</sup> Calculated with an estimate for Rockland which was undisclosed.

## FARMS BY ACREAGE CATEGORY, 1997–2007



# FARMERS

*Though the average age of farmers is going up, the number of younger farmers is also increasing. An increasing percentage of farmers are women.*

- In 2007, there were 8,803 farm operators<sup>1</sup> in the Hudson Valley, and 37% of those were women (3,268). Though some farms were lost between 2002 and 2007, the total number of operators went up by 1%, while the number of female operators increased by 11%.

Of the principal operators (the person primarily responsible for day-to-day operation), 26% were women in 2007, up from 23% in 2002. However, female principal operators seemed to be managing smaller farms, consistently about 12% of total farm acreage in both Census years.

In 2007 fewer farm operators defined farming as their primary occupation<sup>2</sup> than before: 52% cited farming as their primary occupation in 2007, down from 57% in 2002, showing that an increasing number of farmers rely on another job or profession for their livelihood. Some of these may be people transitioning into farming, keeping their “day job” as they do so.

The average age of Hudson Valley farmers is going up: in 2007, the average age of farmers was 57 years old, up from 55 years old in 2002. Changes in age groups are happening at both ends of the spectrum: The number of farmers over the age of 60 increased, but we also saw an increase in the number of farmers under the age of 25, which says that some younger people are entering the profession. The relative numbers, however, show that the region has

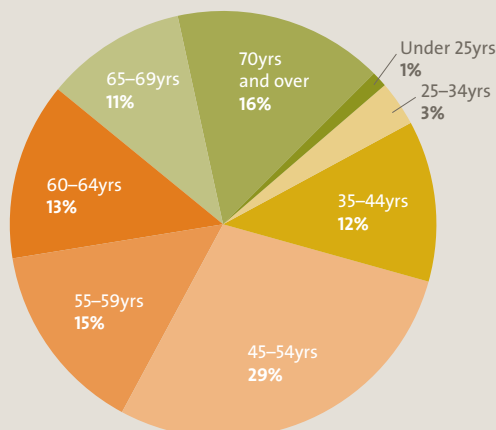
a large group of experienced farmers approaching retirement, with a much smaller number of younger farmers entering the field.

During our review of this data with colleagues in the region, there was consensus that farming is drawing some newcomers—some are young people, and some are entering farming after a previous career. This trend is not fully reflected in the data because newcomers may not have answered the Census survey yet—either because they have a newly established operation, or because they are working as farm staff, apprentices, or interns. For these new farmers to succeed, farming must be a viable career in which one can earn a reasonable living and support a family.

1 The Census defines the term operator as “a person who operates a farm, either doing the work or making day-to-day decisions about such things as planting, harvesting, feeding, and marketing. The operator may be the owner, a member of the owner’s household, a hired manager, a tenant, a renter, or a sharecropper.”

2 The Census collects this kind of demographic information for up to three operators per farm.

AGE GROUPS OF HUDSON VALLEY FARMERS, 2007



# OWNERSHIP

*Hudson Valley farms are predominantly owned by families and individuals.*

- In 2007, almost all of the region's farm businesses were owned by individuals and families (some in partnerships and family-held corporations). Only 1% of farms were owned by non-family corporations.

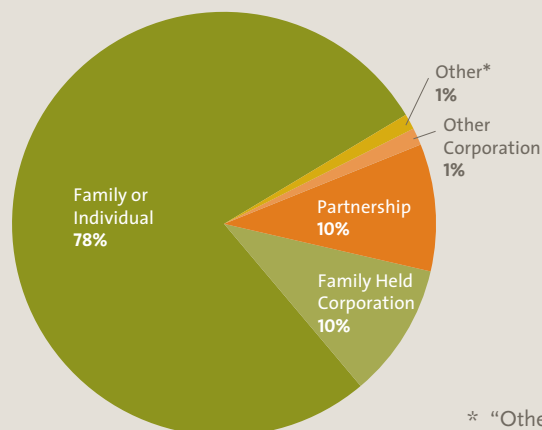
This is an extremely important and special characteristic of the farming sector here. In many other areas of the country, food production is increasingly controlled by corporations that consolidate farmland and farm-related infrastructure into large industrial operations—often to the detriment of farmers' livelihoods and to food quality. The high level of independent ownership in the Hudson Valley illustrates that farms in the region are essentially small businesses that create jobs, contribute to their local economies, and determine their own standards of production.

Another significant indicator of Hudson Valley farmers' independence is the fact that so few farmers in the region hold production contracts. In 2007, 314 farms in NY State reported production contracts, and only 18 of those were in the Hudson Valley. That's only 0.3% of all farms in the Hudson Valley. Production contracts are a hallmark of industrial and factory farming, which often control farmers' practices without paying them a fair share (sometimes relying on practices that are environmentally destructive, with little regard for

animal welfare). However, these contracts usually provide the benefit of assured access to the off-farm infrastructure needed to get products to market. The fact that most Hudson Valley farms are free from such restrictions means that they are empowered to conduct their business however they choose. That freedom allows higher standards and encourages innovation and entrepreneurship. It also means that to survive they must find their own access to markets and to the off-farm infrastructure that they need.

Independent and family farmers also generally follow management practices that ensure the health of the land and surrounding community. Anecdotally, we know that there are many farmers in this region who are working land that has been in their family for generations. Many of those farmers hope that their families will continue to do so in the future. While there are increasing challenges with ensuring that succession, the family connection creates an incentive to be good stewards of the land.

OWNERSHIP STRUCTURE, 2007



\* "Other" includes: cooperatives, estates or trusts, institutions, etc.



# TENURE

*Nearly all Hudson Valley farmers own some of the land on which they operate.*

- **Very few farms in the Hudson Valley are operated by tenants\*—in 2007, only 5% of all farms. So in effect, the overwhelming majority of farmers own at least some of the land that they farm.**

Over half (53%) of farmland in the Hudson Valley was operated by part owners\* in 2007. Many farmers manage multiple parcels within one farming operation. The Census tells us that there were 5,326 farms in the region in 2007, and the Office of Real Property Services counts 14,242 agricultural parcels in that year—suggesting that on average, farms in the Hudson Valley are composed of 2–3 parcels. Taking into consideration that the number of farms in the Census includes a large proportion of smaller farms, likely comprised of one or few parcels, this would mean that the working farms in the region operate even more parcels at once. For example, we know one dairy farmer who manages 30 parcels, most of which are leased.

Farmers who are farming for a living generally own some land, but it's very likely that they also rely on additional rented fields—a dairy farmer using leased land to grow feed, for example. For this reason, leased lands (and the farmers who manage them) are very important to the overall regional farm network. As one colleague said, “Without leased farmland, we wouldn't have agriculture in New York.”

Not only do many Hudson Valley farmers rely on rented land, but often they operate multiple parcels of land rented from several different owners. Furthermore, those parcels are often in different municipalities, creating complicated conditions for farmers. Landowners must understand the importance of establishing long-term relationships that farmers can count on, so that they have the ability to plan for the future and to make the investment of time and resources needed to be good stewards of the soil. It is also important for municipalities to have consistent planning and zoning as it relates to agriculture, to reduce the complexity and uncertainty with which farmers must contend.

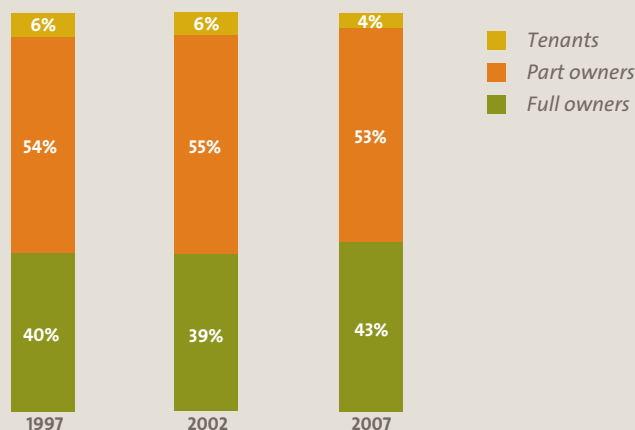
## \* The Census classifies farms by the tenure of the operator:

**Full owners** operated only land they owned.

**Part owners** operated land they owned and land they rented from others.

**Tenants** only operated rented land or worked on shares for others.

ACREAGE BY TENURE, 1997–2007



(Rockland acreage undisclosed in 2002 and 2007.)

FARMS BY TENURE, 1997–2007



# SALES

12% of NY State agricultural sales are from farms in the Hudson Valley.

## Regional value of sales of farm products<sup>1</sup>

1997: \$411,222,000

2002: \$376,036,000

2007: \$511,632,000

## Adjusted for inflation<sup>2</sup>

1997: \$569,417,088

2002: \$464,840,468

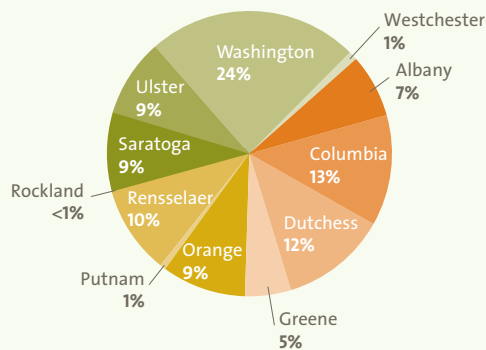
2007: \$549,164,588

- The regional total for sales dropped in 2002, due in part to the fact that it was a bad year for two very important sectors of agriculture in the region: dairy and fruit.

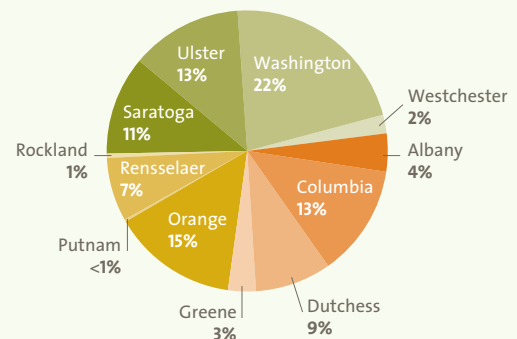
Milk prices were extremely low in 2002 and poor weather caused many orchards to garner only a small fraction of their usual sales that year. However, 2007 was better for both: it was a very good year for fruit orchards, and milk prices were up. Since 2007, milk prices have dropped (see "A Focus on Dairy," p.19).

While the Census seems to show a big gain for regional sales in 2007, in constant dollars the overall value declined slightly. This decrease is very likely due to the loss of farm businesses, especially dairy farms that have not been able to persist when milk prices drop.

**DISTRIBUTION OF FARMLAND BY COUNTY, 2007**



**DISTRIBUTION OF SALES BY COUNTY, 2007**



**SALES BY COUNTY, 1997–2007**



\* Putnam 2007 sales have been estimated.

The large percentage of farms with very low sales can be attributed to the definition of “farm” in the Census. Since the Census requires only \$1,000 or more in sales to qualify as a farm, many operations with very low sales are being included—and they are less dependent on turning a profit. For example, an operation that may be conducting enough agricultural activity to receive an Agricultural Value Assessment, but for whom the cost of doing so may not result in a net gain.<sup>3</sup>

2007	Sales Category	Number of Farms	Percentage of Regional Farms
	< \$10,000	2,989	56%
	> \$10,000	2,337	44%
	> \$25,000	1,534	29%
	> \$50,000	1,130	21%
	> \$100,000	819	15%

Given the expensive nature of farming in the Hudson Valley, farms have to achieve substantial sales to turn a profit, and certainly to support the livelihood of farmer. Only one-fifth of farms in the Hudson Valley had sales higher than \$50K in 2007.

Farms with higher sales have a greater impact on the local community—they are likely to be managing more land, producing more food, and spending more to do business in their community, therefore recirculating more money—so the loss of such farms will have a larger detrimental effect.

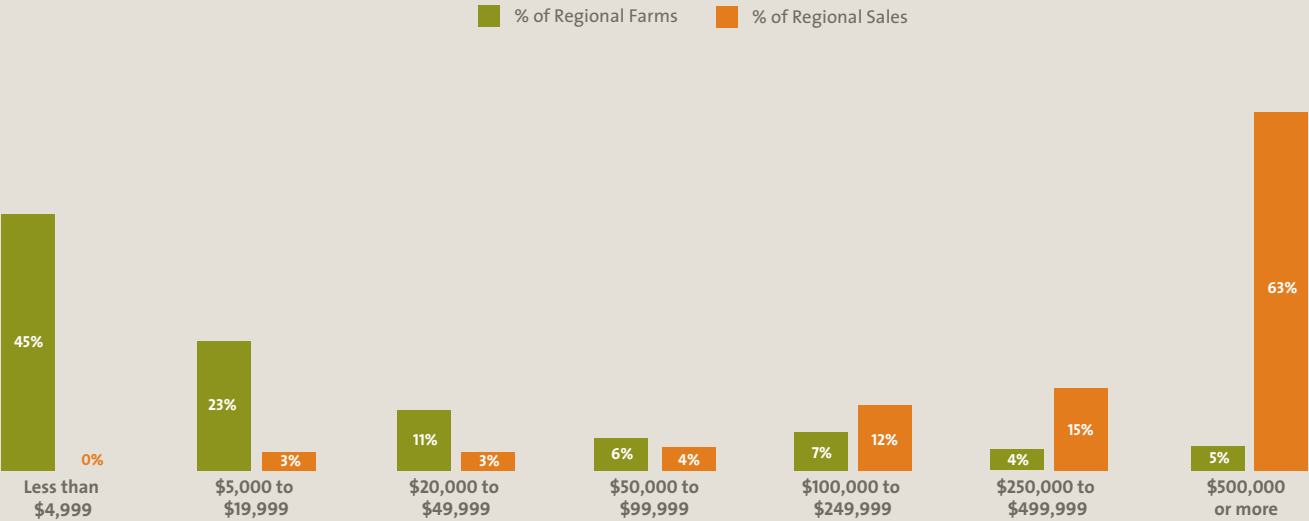
And yet, all farm operations matter, because they are working with the land and producing something. But many farms in the Hudson Valley are not making enough in sales. *They* represent part of the agricultural potential of the region—they have shown an interest and have made an investment, whether in land, equipment, time, or labor. Policy and efforts to support agriculture should be directed at moving those who desire to grow into higher sales brackets, so that farming can be a viable way to make a living.

1 These county-level sales totals are from Table 2 of the published Census—whereas the sales by sector, p.17, is from a special tabulation we received from NASS. The county-level sales totals in the published Census are useful to create a regional sales total, as we have here, but there is too much undisclosed data in the county-level sales by sector to give any accuracy on what those sales were from.

2 In constant 2009 dollars, using CPI Food Index.

3 Eligibility for an agricultural assessment in New York State requires: seven or more acres that were used in the preceding two years for the production for sale of crops, livestock, or livestock products; and annual gross sales of agricultural products averaging \$10,000 or more for the preceding two years. (If an agricultural enterprise is less than seven acres, it may qualify if average annual gross sales equal \$50,000 or more.)

NUMBER OF FARMS vs. REGIONAL SALES VALUE, 2007





# DIRECT SALES

*Farms in the Hudson Valley generate a third of the statewide value of direct sales.*

## Regional value of direct sales<sup>1</sup>

1997: \$11,092,000

2002: \$18,600,000

2007: \$25,331,000

- From 2002 to 2007, the regional value of direct sales increased by 36%. In 2007, the average value of direct sales per farm in the Hudson Valley was 52% higher than the statewide average.

In 2007, Hudson Valley farms with direct sales represented 17% of all farms in New York State selling directly to consumers—but the value of their direct sales was 33% of the state's total. That's an impressive share, no doubt due to the strong direct sales markets (farmers market, CSAs<sup>2</sup>, etc.) in nearby metropolitan areas of New York City and Albany, as well as within the Hudson Valley.

Direct sales bring a higher profit margin to farmers, but selling direct to consumers does not work for all farms. It requires the farmer to coordinate transportation, marketing, and sales—services that would otherwise be provided by a distributor or wholesaler. It requires an investment of time, equipment, and management and personality skills that may not suit all farmers.

Increasingly we see farmers working with a variety of sales outlets, moving from farmers markets to CSAs to direct sales to restaurants or institutions, or some mix of these, and then adding sales to a distributor as well. Many heed the advice of people like Jeremiah Jones, winner of the 2010 Glynwood Harvest Award, who cautions that, “Farmers should never have just one buyer.”

1 These figures may still be lower than the actual value of direct sales in the region. Many of our colleagues expressed the opinion that the value of direct sales in the Census appears too low; they believe it may well be higher.

2 CSA stands for Community Supported Agriculture, a “subscription” model in which members purchase a share of the farm's output for the season, receiving a box each week of freshly harvested produce.



## OTHER INCOME

*Farms in the Hudson Valley receive relatively little in government payments. But farm-related services such as agritourism have great potential to supplement farm sales.*

- In addition to sales, the Census captures information on farm-related income (gross income for sales and services that are related to the principal production of the farm<sup>1</sup>). About a third of all farms in the Hudson Valley reported income in these categories. The average farm-related income in 2007, of farms that reported any, was \$23,187.

**The regional total for farm-related income in 2007 was \$41,481,000—up by 62% since 2002.**

### GOVERNMENT PAYMENTS

Farms in this region do not benefit from government payments<sup>2</sup> as much as farms in other parts of the country. In 2007, the average value of government payments received per farm in the Hudson Valley was only 52% of the national average. And the level of government payments being received by farms in the Hudson Valley has gone down: From 2002 to 2007, the value of government payments went down by 50% in the Hudson Valley, but increased by 22% nationally. The average value of government payments per farm dropped by 49% in the Hudson Valley, but went up by 3% nationally. So the data would suggest that although the government is giving more support to farming in general, less of that is coming to farms here in the Hudson Valley.

### AGRITOURISM

Farm-related income from agritourism and recreational services showed the biggest increase from 2002 to 2007.<sup>3</sup> The general public is not only becoming more interested in local food but is also becoming more interested in having a farm experience. Pick-your-own operations, corn mazes, farm stays, wine tours, and other farm activities are rapidly gaining popularity, and can offer farms a considerable supplement to sales. In 2007, several counties in the Hudson Valley had an average per farm income from agritourism that was over \$10,000.

However, agritourism doesn't work for all farms. Dealing with the public requires particular skills, and a successful agritourism venture depends on a farm's location and marketing abilities. But for those who can do it, it has the potential to provide important additional income. Diversifying a farm's sources of income helps a farm to remain resilient during times of change and instability, and to survive the usual uncertainties of farming, like poor weather. The benefits of agritourism go beyond the additional income it provides to farmers: Agritourism cultivates a public appreciation for the value of farms and for the agricultural character of the region.

### OTHER SKILLS AND RESOURCES

Though it is not reflected in the Census, many farms have other income that is not directly related to the farm but that draws on special skills that farmers have (handicrafts, carpentry, equipment repair, snowplowing, etc.), or special characteristics of a farm itself (for example, some farms are used for film and photo shoots). While not technically "farming," such income can play an important role in keeping farmers afloat.

1 This includes things like agritourism and recreational services (hay rides, corn mazes, farm and wine tours, etc.), rental income from farm property, services provided for others like plowing and harvesting, animal boarding and breeding, crop and livestock insurance payments, as well as local and state agricultural program payments.

2 The Census includes federal government payments from Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmable Wetlands Program (FWP), and Conservation Reserve Enhancement Program (CREP); loan deficiency payments; disaster payments; other conservation programs; and all other federal farm programs under which payments were made directly to farm operators.

3 There are some undisclosed items.

# FARM TYPOLOGY

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*Many farmers in the Hudson Valley rely on another job, or are retired from a previous career.*

- The “farm typology” breakdown was a new element of the 2007 Census<sup>1</sup> that helps to show the number of working farms in the region: businesses that are supporting the livelihood of a farmer.

This farm typology classification helps us to parse out some of the distortions that result from the Census’ “farm” definition. It reveals that half of Hudson Valley farms in the Census are “retirement” or “lifestyle” farms—run by a farmer who has another job or has already had a previous career, which subsidizes their pursuit of farming.

Farming has become a difficult way to make a living. It has long been the case that many farm families in the region depend on a household member who holds another job to provide a stable income and benefits like health insurance. For many farming families, other employment is essential. Farm incomes simply aren’t enough. As one colleague of ours has said, “Something’s wrong when you have to be a surgeon before you can become a farmer.”

While any farming contributes positively to the regional agricultural network, the business of farming will only endure if farmers are supported in making a living from farming.

The Hudson Valley is experiencing a growth in smaller farms, a promising trend that suggests that there may be some new operations becoming established. Smaller farms can have a visible impact on their communities. They have a higher multiplier effect in local economies because they are more likely to connect to local markets and local infrastructure, whereas the profits and impacts of larger commodity-type sales are usually carried out of the region. Smaller farms more often sell within the region because they don’t fit into the larger distribution system, and they can keep a higher percentage if they sell directly to customers (or through a shortened supply chain).

Direct sales do not work for all farms, however. The importance of mid-scale farms should not be overlooked—and even large farms in the Hudson Valley would be considered mid-scale. These are working farms that provide the primary living income for a farmer or a farm family, and they can be particularly important in terms of land stewardship and community benefits. The research initiative called Agriculture of the Middle<sup>2</sup> has been working to make the case that farms in “the disappearing middle” are particularly vulnerable in a polarized food system. They are caught between the consolidated and generously subsidized commodity system (in which they are too small to compete) and the direct market system (they are too big to sell most of their product at farmers markets and CSAs).

Nevertheless, mid-scale farms do have the ability to compete in the larger (commodity-focused) market, while offering alternatives that can be more economically, socially, and environmentally sustainable.<sup>3</sup> One of the best ways they can do so is by creating distinctive products (Hudson Valley Fresh serves as a good example). There is growing consumer demand for high-quality food made with sustainable practices, telling a story about where it was produced and by whom. To meet this market demand, producers need manufacturing, processing, marketing, and distribution services that are more accessible. The unavailability of such services greatly weakens the ability of mid-scale producers in the region to compete in the marketplace, and therefore to turn a profit that will keep them in business and working the land.

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1 The Economic Research Service (ERS), an agency of the United States Department of Agriculture, has established this typology of farms.

2 Agriculture of the Middle: <http://www.agofthemiddle.org>

3 “Why Worry About the Agriculture of the Middle?” A white paper by Fred Kirschermann, Steve Stevenson, Fred Buttel, Tom Lyson, and Mike Duffy.





## FARM TYPOLOGY, 2007

■ Acreage  
■ Farms

### SMALL FAMILY FARMS

#### Limited-resource

Sales less than \$100,000  
Total operator household income less than \$20,000  
(Limited-resource farmers may report farming, a non-farm occupation, or retirement as their major occupation.)



#### Retirement

Sales less than \$250,000  
Operators report they are retired



#### Residential/lifestyle

Sales less than \$250,000  
Operators report a major occupation other than farming



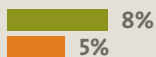
#### Farming occupation/lower-sales

Sales less than \$100,000  
Operators report farming as their major occupation



#### Farming occupation/higher-sales

Sales between \$100,000 and \$249,999  
Operators report farming as their major occupation



### OTHER FARMS

#### Large family farms

Sales between \$250,000 and \$499,999



#### Very large family farms

Sales of \$500,000 or more



#### Nonfamily farms

Farms organized as nonfamily corporations or cooperatives, as well as farms operated by hired managers



# EXPENSES

*Farmers in the Hudson Valley are challenged by higher costs of production.*

## Regional farm expenses

1997: \$349,236,000

2002: \$388,186,000

2007: \$482,421,000

- Only about a third of farms in the region show a net gain\*: 35% in 2002, and 37% in 2007. The majority of Hudson Valley farms are reporting net losses: 63% in 2007.

There is no doubt that it is expensive to farm in the Hudson Valley, and this is one of the biggest factors in farmers' ability to achieve a net gain. The table below compares farm sales and costs in the Hudson Valley to a statewide level, and to Southeastern Pennsylvania (an agricultural region with a similar large metropolitan market). It shows that farmers in the Hudson Valley operate with a narrower margin for profit, as they contend with an expense-to-sales ratio of 94%. In other words, 94% of what farmers in the Hudson Valley took in from sales went straight to production expenses. In 1997, the expense-to-sales ratio was 85%.

*The Bureau of Economic Analysis also provides figures for farm income and expenses on a yearly basis, using information from various sources of data in the USDA (including the Census). We compared the BEA numbers to the Census and though the sales figures are relatively comparable, the totals for regional farm expenses from the BEA data are much higher than those in the Census. For 2007, the BEA data gives an expense-to-sales ratio of 109%.*

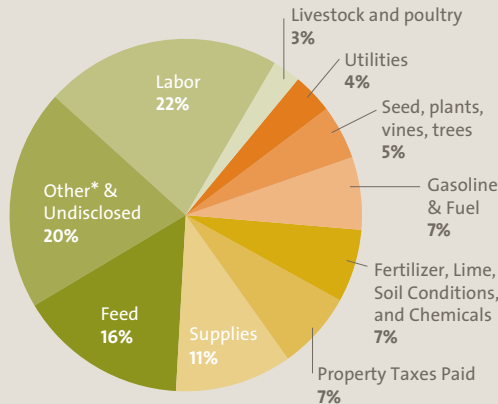
**In 2007, the average net cash income of Hudson Valley farmers was only 42% of the statewide average, and 39% of the average in Southeastern Pennsylvania.**

2007	Hudson Valley	New York State	Southeastern Pennsylvania**
Avg production costs per farm	\$90,578	\$96,372	\$145,525
Avg sales per farm	\$96,063	\$121,551	\$174,763
Avg net cash income*	\$13,624	\$32,533	\$35,032
Expense-to-sales ratio	94%	79%	83%

\* Net cash farm income, and gain vs. loss, is derived in the Census by subtracting total farm expenses from total sales, government payments, and other farm-related income. However, no allowances are made in Census "expenses" data for capital expenses or depreciation on capital assets, so the Census data does not give a complete picture of net farm income.

\*\* Berks, Bucks, Chester, Lancaster, Montgomery, and York counties.

## FARM PRODUCTION EXPENSES, 2007



From 2002 to 2007, overall production costs went up by 24%, and average costs per farm went up by 21%. The expenses of gasoline and fuel increased by 70%, the expense of hired farm labor increased by 41%, and the expenses of fertilizer, lime, and soil conditioners increased by 37%.

\* Other expenses include: customwork and custom hauling; cash rent for land, buildings, and grazing fees; rent and lease expenses for machinery, equipment, and farm share of vehicles; interest expense; animal health costs; storage and warehousing; marketing and ginning expenses; insurance.

# THE INVESTMENT IN FARMING

*Farmers in the Hudson Valley have an enormous investment in farming.*

## Regional value of investment in farming<sup>1</sup>

1997: \$2,777,963,000

2002: \$3,416,308,000

2007: \$3,956,876,000

- The land, buildings, equipment and machinery that farmers own are assets whose value should be acknowledged and respected.

The average investment per farm in 2007 was nearly three-quarters of a million dollars—and given that the Census farm numbers include many small operations, farmers that are farming for a living would have considerably more invested.

There has been great interest in trying to use the public sector to leverage private sector investments. But since agriculture's economic value—or impact—is not always visible, the investment that farm families have already made often gets overlooked. As a result, economic development entities tend not to leverage that investment by strengthening the off-farm infrastructure on which farmers rely.

If farmers had more supportive infrastructure—like financing, farm support services, processing facilities, distribution options, marketing assistance—they would be better able to make the most productive use of investments they've already made. The benefits of that would echo throughout communities and the regional economy.

<sup>1</sup> Total value of land, buildings, equipment and machinery.

## ESTIMATED MARKET VALUE OF LAND, BUILDINGS, MACHINERY, AND EQUIPMENT, 1997–2007





# FARMING AS AN ECONOMIC ENGINE

*The business of farming is a powerful driver of local economies.*

- Farming generates economic impacts that are not revealed simply by the value of sales. Farmers’ use of services from many other businesses (suppliers, labor, manufacturing, processing, distribution, etc.) results in an amplified economic impact.

Until recently, we have not had adequate multiplier figures to help us illustrate agriculture’s overall economic impact. Thanks to recent work at Cornell, new information is now available.<sup>1</sup> Glynwood used these multipliers to estimate the total gross economic impact of farming in the region in 2007: **\$810 million**.

### FARMERS SPEND LOCALLY

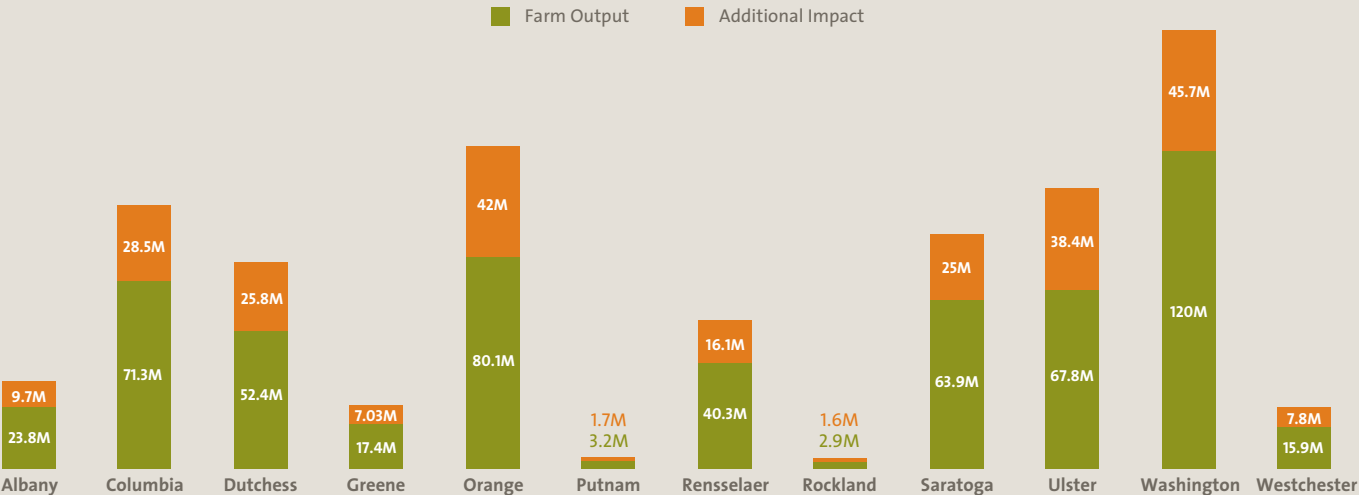
Farmers tend to spend locally as much as possible, so the impact of their spending in their local community is often much higher than that of other industries.

The fact that farmers in the region had an expense-to-sales ration of 94% shows that farmers spend a lot—and most of that was spent locally. We conducted an informal survey, asking farmers what percentage of their overall expenses was spent in the region. Answers ranged from 60% to 75%, and some were even higher (depending on the type of farming). Most farmers would spend 100% locally if they could!

The money that farmers spend has a strong “ripple effect”—but it only works if supportive farm infrastructure remains available. Farmers depend on local supplies and services, and those businesses depend on their farm clients. In areas where farm numbers are shrinking, the support services go too, isolating farmers and making it even harder for new farms to start (*see our example on p.20*). Without the existence of those services and suppliers, farmers will go elsewhere to get what they need. If doing that makes their expenses prohibitive, they’ll go out of business—and the wealth they re-circulate in the region will be lost.

<sup>1</sup> Todd Schmit and Nelson Bills of Cornell University provided their research, which includes different multipliers for each Empire State Development region. We applied the relevant multipliers to Census data, using a broad measure of output and generative impacts that includes sales of crops and livestock products, farm-related income, and government payments. We used different multipliers for each of these categories before totaling into one sum.

ECONOMIC IMPACT OF FARMING, 2007



## FARMING CREATES JOBS

Many farms, of course, rely on hired labor. And farming's reliance on a range of support service providers and suppliers means that agriculture supports the jobs created in those businesses. Farming has an impact on job creation in many other sectors too, including retail, wholesale, manufacturing, tourism, housing, banking, and real estate.

*Glynwood's Keep Farming® program guides communities in assessing the impact of local farming. One of the program's most powerful tools is an Economic Assessment survey that assists residents in determining how much money farmers circulate in their community. We have seen the profound effect this knowledge has—in one small rural community in the Hudson Valley the knowledge that farmers spend at least \$1.25 million each year was key to generating community support for plans to encourage their continued operations.*



## FARMS PAY FOR MORE THAN THEY USE

- **Agriculture contributes to the local economy and adds to tax revenue.\***

Local tax revenue pays for community services like water, sewer, roads, police & fire protection, and schools. But most of those services are provided to residents in a community—not to farms—and residential land uses often do not cover their costs for these tax-supported services. In other words, the services provided to residential properties cost more than the tax revenue provided by those properties.

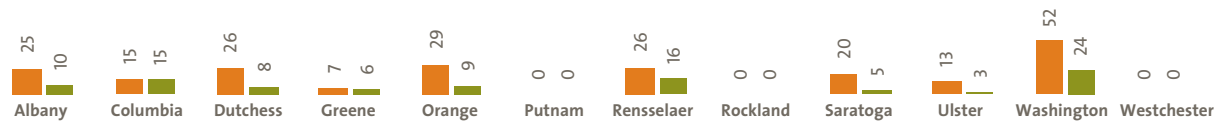
Farms, on the other hand, require very little in public services. The taxes paid by farms often exceed what they draw in the form of public services. Although working lands may generate less tax revenue overall when compared to residential properties, they require far less in public services—making them a net contributor to the tax revenue.

\* American Farmland Trust has done extensive research on this topic. AFT's Cost of Community Services studies have analyzed demands on public services, showing how much it costs to provide public services to each land use in a given community (e.g., residential, commercial and farmland). These studies have shown that working lands generate more public revenue than they receive back in public services. The numbers cited above are from AFT's 2010 New York Agricultural Landowner Guide. [www.farmlandinfo.org](http://www.farmlandinfo.org)

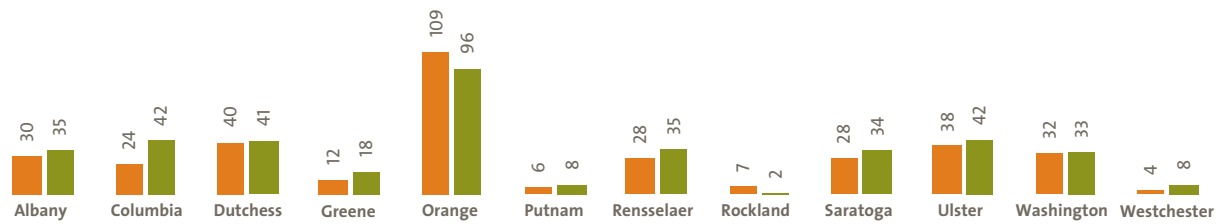
# APPENDIX A:

## FARMS BY PRINCIPAL PRODUCTION, 2002–2007

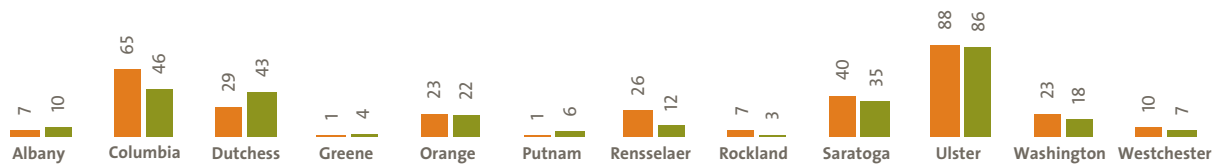
### OILSEED & GRAIN



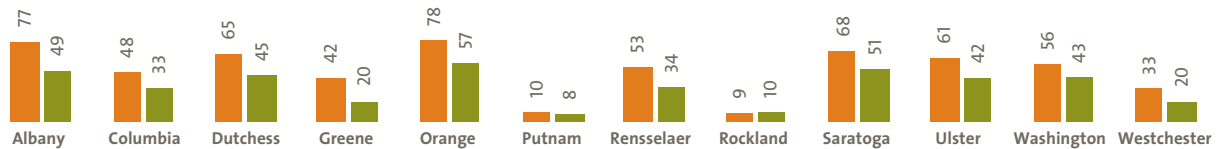
### VEGETABLE & MELON



### FRUIT & NUT



### GREENHOUSE & NURSERY

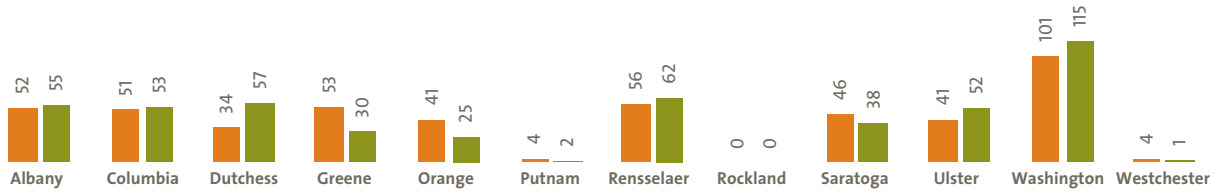




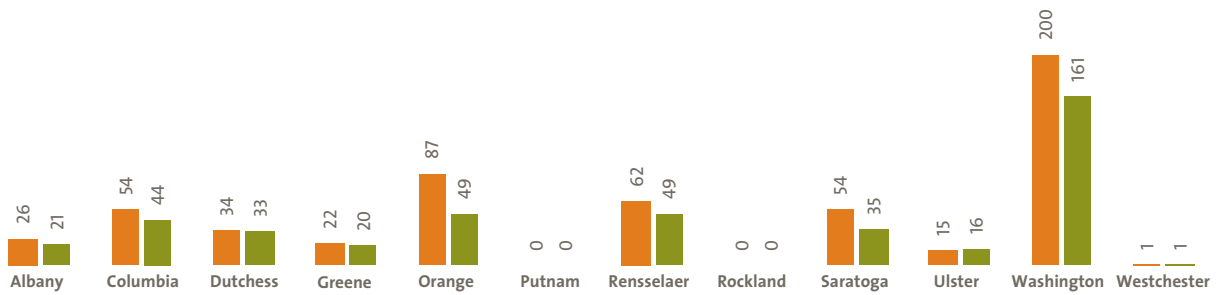
### MIXED CROPS, HAY & OTHER CROPS



### BEEF CATTLE



### DAIRY



### HOG & PIG



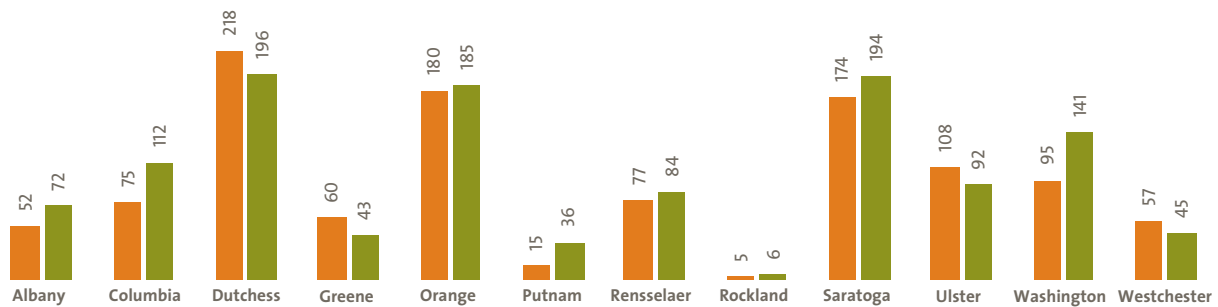
## POULTRY & EGG



## SHEEP & GOAT



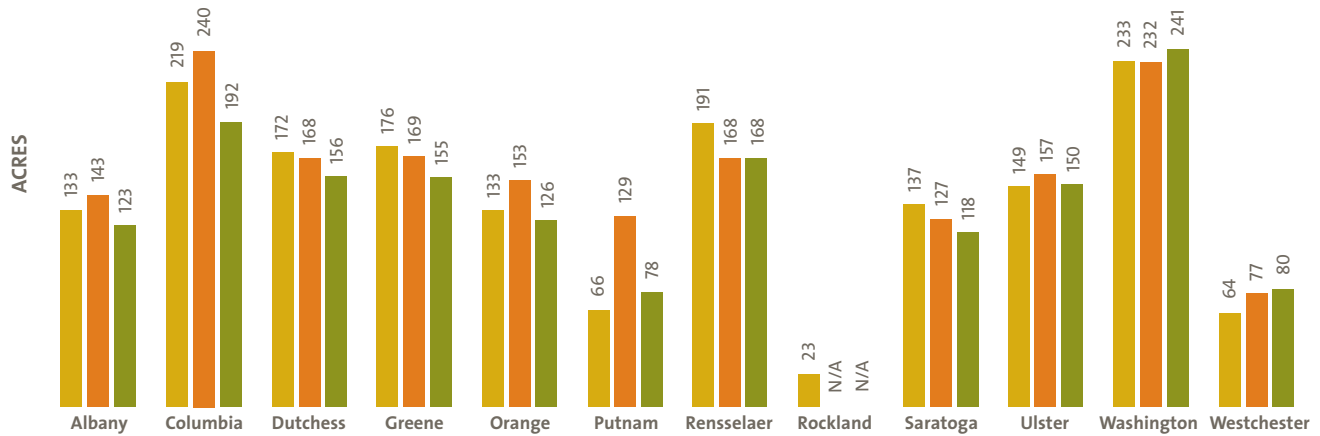
## MIXED LIVESTOCK, HORSES, & OTHER ANIMALS



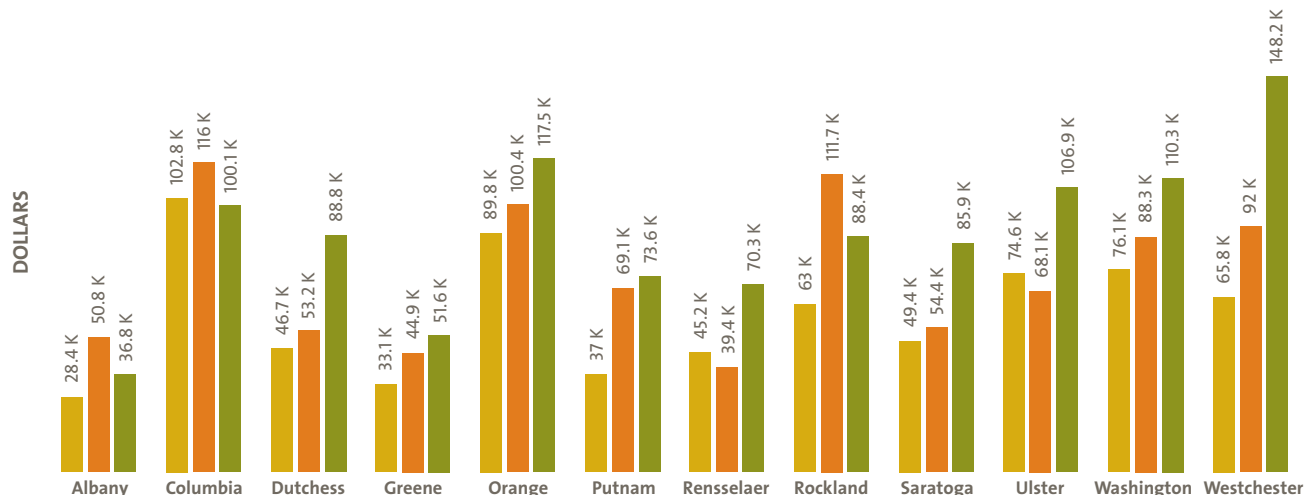
## APPENDIX B: AVERAGES BY COUNTY, 1997–2007

1997  
2002  
2007

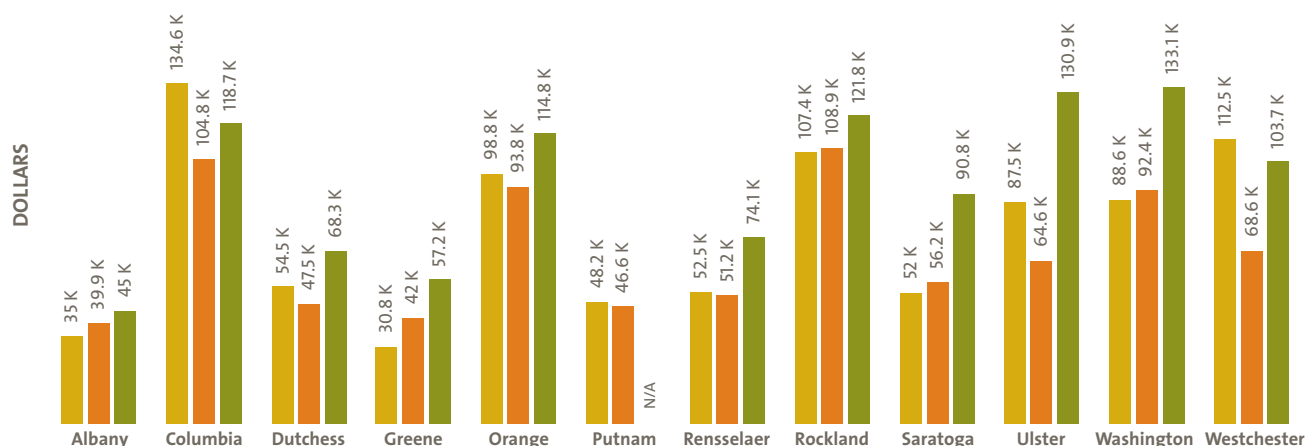
### AVERAGE FARM SIZE



### AVERAGE PRODUCTION COSTS PER FARM



### AVERAGE SALES PER FARM



## APPENDIX C: USE OF THE CENSUS

- **County-level data was the key ingredient in compiling this regional summary. For that, we relied on the Census of Agriculture, published by the USDA's National Agricultural Statistics Service (NASS). It is the best publicly available source for consistent county-level data on farming. Although our desire for detailed information on farming in the region is not fully answered by the Census, it is the best option for assembling a regional picture.**

Use of the Census requires careful navigation, and we have included notes on our process when necessary. Readers should keep in mind:

- The Census of Agriculture is conducted every five years. Census surveys capture data for the year of the survey. In other words, the Census does not show cumulative data, rather each Census is a snapshot in time that is influenced by that year's weather and market conditions.
  - The Census defines a farm as "any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the Census year." Therefore it may appear to overstate the number of what most people think of as "farms."
  - Changes to the Census in 2002 made it impossible to directly compare data to earlier Census years. However, some items were adjusted in the data from 1997 and then re-published with the 2002 Census, to allow comparisons back to 1997. All of the 1997 data used in this report is drawn from the 2002 Census publication and is therefore comparable.
- The Census of Agriculture follows strict disclosure rules to avoid revealing the information of an individual operation. If an item could identify data reported by a farmer, it is not published (for example, sales from sheep farming in a county with very few sheep farms). We had to work around several such instances of undisclosed data. To deal with those, we have done one of the following:
    - Indicated if a figure was unavailable. In these cases, it can be assumed that any such tallies (sales, acreage, inventory) would actually be higher, since they do not include the undisclosed figures.
    - Used the available data to make estimates, indicating when we have done so.
    - Utilized the "special tabulation" service offered by NASS, indicating when we have done so. By requesting a tabulation that combined all 12 counties into one figure, we were able to get more accurate regional totals for things like sales by sector, which were otherwise incomplete due to multiple undisclosed figures in the published Census.





# THE NEED FOR BETTER DATA

- **Agriculture has been the “invisible economy,” so it is a challenge to build an accurate picture of regional farming and to illuminate the economic importance of farming. Most of the time, we simply don’t have sufficient data.**

As champions of our regional farmers, we need to have data that helps us to illustrate the state of agriculture in our region—good data that we can hold up to say: “Farming isn’t dead!”

Farmers make a valuable contribution when they complete the Census surveys with thorough and accurate information. We are reliant on that data—it is essential in making a case for greater support for farming.

And yet, the Census itself has limitations, especially when applied to farming in our region. The Census is built to better capture information for commodity-type production, in which farms produce great amounts of a few crops for the commodity market. That’s not the type of farming that dominates the Hudson Valley. The Census would serve us better if it were designed to provide more detail on the kind of farming we do have, to assist efforts that seek to strengthen the regional food system.

In our work on this report, we have made every effort to glean relevant information and make accurate analyses using the available data. We hope that this exercise will underscore the need for agricultural data that can be used on a regional level, and that the summary contained here will be useful to farmers, policy makers, entrepreneurs, advocates, and all who wish to see farming persist.





## COUNTY SNAPSHOTS

To accompany the regional summary in this report, we have prepared ‘snapshots’ of data for each county. Please visit our website to download these summaries: [www.glynwood.org](http://www.glynwood.org)

## SPECIAL THANKS

Many colleagues in the Hudson Valley assisted with the production of this report by reviewing the data with us, suggesting interpretations, and providing their knowledge of farming in the region. We also consulted with experts in the region and statewide who answered questions and assisted with specific areas of our research. We are grateful to all these advisors, who gave us their valuable time and expertise:

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Sara Forrest, [www.saraforrestphoto.com](http://www.saraforrestphoto.com)  
Erik Goldstein, [www.erikgphotos.com](http://www.erikgphotos.com)

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David Frisco, [www.davidfrisco.com](http://www.davidfrisco.com)  
*Design assistant:* Christine Bombard

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*Glynwood's mission is to save farming in the Northeast.*

We are working to realize a vision—a vision of a farming revival, and a revitalization of farm communities throughout the Northeast—a vision of working farmscapes supporting energetic local economies and communities—a vision of consumers having ready access to fresh, healthy food produced by local farmers who practice land stewardship and environmentally sustainable agriculture.

### **Glynwood's programs include:**

**Modular Harvest System™**, the first USDA-licensed mobile slaughterhouse for large animals in the East, was launched by Glynwood to model an innovative solution to independent livestock producers' need for humane and high-quality slaughter facilities.

**Keep Farming®** provides communities hands-on training and constituency-building to develop and implement plans for supporting local farming and conserving farmland.

**Glynwood Farm** innovates, tests, and demonstrates the economic viability of sustainable agriculture, including current initiatives in pasture restoration and soil fertility.

**Glynwood Harvest Awards** annually recognize and celebrate farmers, organizations, and businesses from around the country for innovative work in support of farming and regional food systems.

**The Glynwood Institute for Sustainable Food and Farming** develops creative marketing strategies. Its first project is a *National Media Center for Sustainable Food*.

**Glynwood Reports** range from this analysis of the state of agriculture in the Hudson Valley, to guides designed to encourage land trusts to ensure that “protected” farmland is used productively.

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P.O. Box 157  
Cold Spring, New York 10516  
Tel: 845-265-3338  
Fax: 845-265-3391  
[www.glynwood.org](http://www.glynwood.org)

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