

## Agriculture



For many, farmland is synonymous with open space, but what farmland “means” as open space depends on one’s perspective. To some, farmland may represent a “placeholder” for either future park or recreational lands or future residential or commercial developments, and for others farmland may be appreciated as the working landscape that it is. For farmers, like any property owner, the land is a primary investment. To be sure some farmers see their land as the means of making possible a future that does not include their continued farming in Orange County, but for farmers that want to stay in the business of farming the land is at the heart of the business.

The expectations for Orange County’s remaining farmland are many. The challenge for the County is to find the common ground among the varied perspectives, and to meet overall goals related to the County’s economy, fiscal management, and how the overall landscape mosaic relates to “livability” or quality of life.

Farmland is a commercial land use that can, when managed to do so, concurrently provide open space, recreational opportunities, watershed protection, and biodiversity protection and enhancement. Lands with agricultural use can also be used to help balance public revenues and expenditures. But for a farmer to stay on the land in the business of farming he or she must be able to generate sufficient income from the farm operation and not have overwhelming economic disincentives related to agricultural markets, high land values or taxation that forces the sale of the farm. If the County is to successfully institute policies to keep substantial areas of land as working farmland, it will be necessary to address both farmland preservation and agricultural economic development through appropriate means.

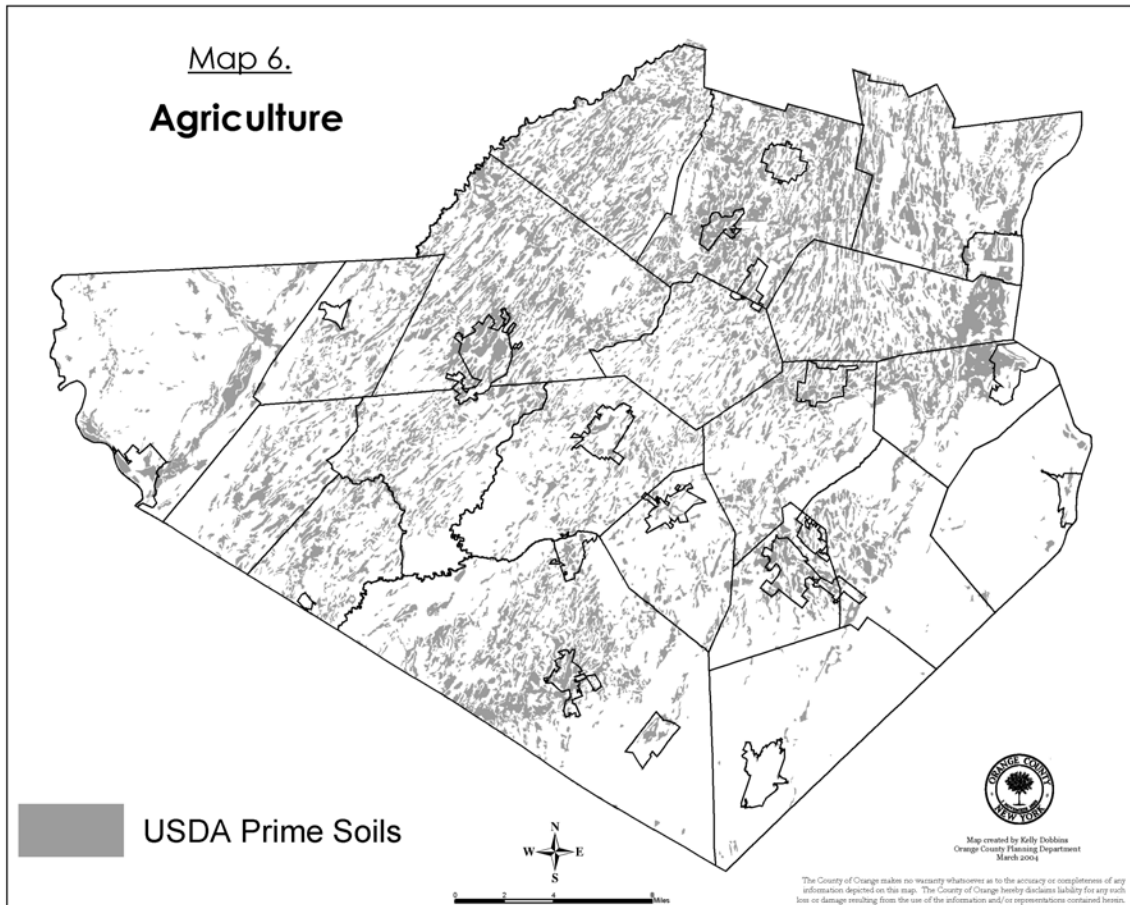
To preserve critical areas of farmland the Orange County Open Space Plan recommends the following actions be taken at the County level:

- Support farm-friendly land use policies and programs at the County and municipal levels.

- Implement the 2004 Agricultural Economic Development Strategy.
- Choose purchase of development rights (PDR) and/or term easement strategies and commit to levels of public investment that meet open space plan goals.

What follows is an assessment of the current state of agriculture in Orange County.

### Agriculture in Orange County – Current Conditions<sup>♦</sup>



<sup>♦</sup> A comprehensive analysis of agriculture in Orange County is available in the 2004 Orange County Agricultural Economic Development Strategy.

## **Economic Impact of Orange County's Agriculture Sector**

Understanding the structure and characteristics of agriculture in Orange County is essential to understanding how farmland can and should relate to County efforts to plan open space. Because farming is a business, it is important to consider the role of agriculture in the County's economy and relevant economic characteristics that have implications for farmland conversion. There are two common methods for measuring the economic impact of any sector of the economy: 1) the direct measure of a sector's economic importance as measured by its output; and 2) an output multiplier for the sector which quantifies the sum total of upstream and downstream effects on the economy.

The direct measure of the output of the four principal farm commodities (vegetables, dairy, greenhouse/nursery, and livestock) in Orange County was \$62.1 million in 1997, accounting for 89 percent of the County's \$69.8 million farm output. In 1997, the vegetable and dairy sectors were of equal value, just over \$20 million dollars per industry.

Since economic output does not happen in a vacuum, analysts often use output multipliers as a secondary measure of economic activity. Goods, services, and labor from within the economy are used to produce output. This output is usually further transformed by other sectors of the economy, stimulating more business activity. Thus, a second measure of economic impact is an output multiplier for a sector, which quantifies the sum total of upstream and downstream effects on goods, services and labor.

Based on the output multipliers for Orange County's farm commodities, every \$1 increase in total farm output led to an additional 55 cents in economic activity in other sectors of the local economy. Thus, the direct output of Orange County's agricultural sector was \$69.8 million, but an additional \$38.4 million was generated in other sectors of the local economy, based on 1997 data (the year of the most recent USDA Census of Agriculture which was available for the preparation of this plan). Using the latest data from 2000 for the aggregate farm sector, output value was \$108.4 million, which generated another \$59.6 million in other sectors.

### **The Economic Challenge**

Agriculture in Orange County, New York is undergoing significant structural change as its agricultural base transitions from a pure wholesale commodity basis of dairy, tree fruit, and vegetable production to an economy based on the production of higher value crops, direct market oriented marketing, and agritourism. This is occurring at a time when the value of developable land is substantial and appears to be trending upwards.

Historically, dairy farms and feed production to support the dairy industry had comprised a significant portion of Orange County's agriculture industry. However, with the change in federal dairy policies in the 1980s and the emergence of corporate-sized

dairies in the West in the 1990s, family-sized dairy farms in the Eastern states faced a rough economic climate. Orange County, N.Y. was not immune. From 1985 to 2000, dairy cow numbers in the County were cut in half. In addition, the amount of hay and corn acreage dropped dramatically during this same time period.

### **Key Economic Findings**

Orange County's farm economy produced \$108.4 million in output value in 2000, which generated an additional \$59.6 million in related economic activity within other sectors of the local economy.

In the last 15 years, growth in Orange County's vegetable and greenhouse/nursery sectors have offset the declines experienced in the dairy and feed sectors. Cash receipts for vegetables produced in Orange County were up 52 percent from 1987 to 2000, while cash receipts for the sale of greenhouse and nursery crops more than doubled during this time period.

The vegetable sector is the largest segment of the farm economy and accounts for nearly 40 percent of Orange County's agricultural output. However, there have been significant swings in this sector's output in the last decade, suggesting some instability.

A few farms with relatively high sales provide most of Orange County's agricultural economic activity. In 1997 the largest 30 percent of the farms accounted for 86 percent of the County's agricultural output.

After trending higher for much of the 1980s, farm profitability in Orange County fluctuated widely in the 1990s. These variations likely reflected changes in the vegetable sector over the same period.

Growth in vegetable production and the greenhouse/nursery sector have been matched by an increase in Orange County's wholesale trade and, in the case of vegetables, vegetable manufacturing. The decline in the dairy sector caused losses in the number of farm supply stores, dairy manufacturers, and dairy wholesalers in Orange County.

Despite the decline in the dairy sector, Orange County's agriculture has adapted to national and local economic forces. At a local level, Orange County has experienced significant growth in population: 31 percent in the last 20 years. Such growth can contribute to higher land and labor costs for farmers but this growth can also lead to new local markets for high value crops that are costly or difficult to transport and desired by suburban and urban consumers. As a result, local vegetable, nursery, and greenhouse producers find they may have a comparative advantage and the opportunity to pursue alternative marketing strategies (i.e. direct or near-direct marketing).

Orange County can help the ongoing transition of its agricultural industry and individual farms by pursuing the economic development strategy for the sector as laid out in the 2004 Orange County Agricultural Economic Development Strategy. The 2004 Strategy

recommends a combination of structural economic development programs, such as business retention, expansion, and attraction programming related to primary production sectors; recruitment or internal development of secondary market opportunities; broad based work force development; and infrastructure planning, as well as business development programming that specifically addresses the needs of individual agricultural enterprises. Please consult the 2004 Strategy for details.

### **Farm Characteristics**

The number of farms in Orange County fell by 17 percent from 1987 to 2001, with most of the decline occurring from 1987 to 1997. At the same time, land in farms fell by 20 percent. Based on data from the New York Agricultural Statistics Service for 2001, the most recent year available, there were 730 farms in Orange County that covered nearly 95,000 acres or 18 percent of the total area in Orange County.

Farm size, as measured by average acreage per farm, declined modestly from 135 acres per farm to 129 acres per farm from 1987 to 2001. Although national farming trends show farms growing larger, the shift of Orange County's agriculture from dairy to vegetables and greenhouse/nursery crops would explain why farm sizes have remained nearly constant over the last 15 years, as these crops are more labor intensive and less land intensive.

Even though Orange County farms are relatively small in terms of acreage, a significant proportion of these farms post high sales figures relative to most other New York counties. For 1997, 30 percent of Orange County's farms had gross sales of more than \$100,000, up from only 25 percent in 1987. Yet these large farms accounted for nearly 86 percent of the County's agricultural output in 1997. There are just as many farms with sales of less than \$10,000 but this group of farms shrunk from 33 percent of all farms in 1987 to 30 percent by 1997.

### **Operator Characteristics**

In areas such as Orange County with high conversion pressure on the agricultural base, it is important to understand the structure of farm ownership, operator characteristics, and the factors that influence farmland conversion.

Counter to regional trends, agriculture continues to have a substantial presence in Orange County. Given the industry's heavy dependence on dairy, vegetable, and nursery/greenhouse production, this is not surprising. Much of this dependence on agriculture as a primary income source can, in fact, be linked to the substantial muck lands in the County. Based on interviews conducted for the 2004 Orange County Agricultural Economic Development Strategy the 30 percent of farmers who derive primary income elsewhere farm as a source of secondary income. The primary income of a spouse typically supports the farming venture. Anecdotal evidence indicates that hobby farming is not as prevalent as in nearby jurisdictions, however it is growing with urban encroachment. As this segment grows, it will be important to gauge its needs and issues, and integrate it within the broader agricultural support network.

An interesting and significant point raised during interviews about future full time farm operators is that these future farmers are likely to rise from the ranks of the current agricultural labor force. Many of those interviewed for the 2004 Orange County Agricultural Economic Development Strategy are expecting Hispanics and Asians to make up a large portion of the new farmers that are not intergenerational transfers. If this population does provide a significant influx of new farm operators/owners, it will be important to address capital access and training issues to facilitate the transfer.

Table 1: Selected Farm Operator Characteristics

Operator Characteristics	Orange County		Hudson Valley		New York State	
	Total	% Total	Total	% Total	Total	% Total
<b>Total Farm (Number)</b>	<b>624</b>	<b>100%</b>	<b>2,365</b>	<b>100%</b>	<b>31,757</b>	<b>100%</b>
<b>Average Age</b>	<b>53.0</b>		<b>56.5</b>		<b>53.5</b>	
<b>Operator by Age Group</b>						
<b>54 and Younger</b>	<b>348</b>	<b>56%</b>	<b>1,159</b>	<b>49%</b>	<b>17,357</b>	<b>55%</b>
<b>55 and Older</b>	<b>276</b>	<b>44%</b>	<b>1,206</b>	<b>51%</b>	<b>14,400</b>	<b>45%</b>
<b>Operator by Place of Residence</b>						
<b>On-Farm</b>	<b>470</b>	<b>75%</b>	<b>1,834</b>	<b>78%</b>	<b>26,320</b>	<b>83%</b>
<b>Off-Farm</b>	<b>118</b>	<b>19%</b>	<b>378</b>	<b>16%</b>	<b>3,849</b>	<b>12%</b>
<b>Principal Occupation</b>						
<b>Farming</b>	<b>435</b>	<b>70%</b>	<b>1,431</b>	<b>61%</b>	<b>18,426</b>	<b>58%</b>
<b>Other</b>	<b>189</b>	<b>30%</b>	<b>934</b>	<b>39%</b>	<b>13,331</b>	<b>42%</b>
<b>Operators by Gender</b>						
<b>Male</b>	<b>552</b>	<b>88%</b>	<b>2,054</b>	<b>87%</b>	<b>28,632</b>	<b>90%</b>
<b>Female</b>	<b>72</b>	<b>12%</b>	<b>311</b>	<b>13%</b>	<b>3,125</b>	<b>10%</b>

Source: 1997 Census of Agriculture.

Other operator characteristics of note include Orange's relatively low average age and high proportion of young farmers (56% under age 55). Nationally, the non-governmental organization Farm Aid found that for every farmer under age 35 there are two over age 65. The fact that many farmers do not live on the farm is an indicator of high residential land values and the fact that much of the production land is in the hands of people other than the farmer.

## **Land Tenure**

A substantial percentage of Orange County farmland is owned and controlled by non-farmers. This is demonstrated in 1997 federal statistics whereby only 19% of local farms were fully owned by the farm operator, 31% were partly owned by the operator, and 14% were tenanted only. This ratio is significantly higher than those for the region and State where nearly 60% of farms are owned by the operator. This situation, which seems to impact significantly on dairy producers, contributes to a sense of instability. With ownership split among family members (many of whom no longer farm), speculators, and others, farmers are never sure about their land base from year to year. This trend has important implications for on-farm investments in plant and capital equipment, as

farmers are reluctant to make significant investments in property that they do not control.

Farms in Orange County also seem more likely than their other New York counterparts to be under corporate and partnership legal structures. This fact is significant for several reasons. First, the corporate form of ownership facilitates intergenerational transfer by reducing the estate tax burden on succeeding generations. Second, it was the experience of the consultants that prepared the 2004 Orange County Agricultural Economic Development Strategy that corporate farms are more likely to transfer management to a younger generation at an earlier stage than are sole proprietors. However, high corporate and partnership ownership of farms may also indicate the presence of speculative investors in agricultural lands. The 1997 Census of Agriculture indicated that 24 percent of Orange County farms are held in partnership or as a corporation.

Table 2: Selected Farm TENURE Characteristics

Tenure Characteristics	Orange County		Hudson Valley		New York State	
	Total	% Total	Total	% Total	Total	% Total
<b>Total # Farms</b>	<b>624</b>		<b>2,365</b>		<b>31,757</b>	
<b>Total Farm Acreage</b>	<b>94,771</b>		<b>453,818</b>		<b>7,254,470</b>	
<b>Legal Structure</b>						
<b>Sole Proprietorship</b>	<b>473</b>	<b>76%</b>	<b>1,745</b>	<b>74%</b>	<b>26,855</b>	<b>85%</b>
<b>Partnership</b>	<b>69</b>	<b>11%</b>	<b>277</b>	<b>12%</b>	<b>3,153</b>	<b>10%</b>
<b>Corporation</b>	<b>79</b>	<b>13%</b>	<b>322</b>	<b>14%</b>	<b>1,568</b>	<b>5%</b>
<b>Other</b>	<b>3</b>	<b>0%</b>	<b>21</b>	<b>1%</b>	<b>181</b>	<b>1%</b>
<b>Type of Interest</b>						
<b>Full Owner (Farms)</b>	<b>334</b>	<b>54%</b>	<b>1,404</b>	<b>59%</b>	<b>19,170</b>	<b>60%</b>
<b>Full Owner (Acres)</b>	<b>26,600</b>	<b>28%</b>	<b>153,207</b>	<b>34%</b>	<b>2,782,516</b>	<b>38%</b>
<b>Part Owner (Farms)</b>	<b>194</b>	<b>31%</b>	<b>728</b>	<b>31%</b>	<b>10,742</b>	<b>34%</b>
<b>Part Owner (Acres)</b>	<b>51,609</b>	<b>54%</b>	<b>269,778</b>	<b>59%</b>	<b>4,126,147</b>	<b>57%</b>
<b>Tenant (Farms)</b>	<b>86</b>	<b>14%</b>	<b>233</b>	<b>10%</b>	<b>1,845</b>	<b>6%</b>
<b>Tenant (Acres)</b>	<b>16,562</b>	<b>17%</b>	<b>30,688</b>	<b>7%</b>	<b>345,807</b>	<b>5%</b>

Source: 1997 Census of Agriculture.

Outside of the "Black Dirt" region, the consultants found that rental rates are declining as fewer farmers compete for upland resources and as landowners seek to reduce the property tax burden through the preferential agricultural tax provisions (i.e. supply has outpaced demand). With nearly 12,000 surplus acres of vacant, productive agricultural land in the County, it is unlikely that this condition will change in the near future unless there is an increase in farmer demand.

### Farm Conversion/Transition Characteristics

During the process of conducting interviews for the 2004 Orange County Agricultural Economic Development Strategy, the concepts of expansion, business growth, and farm transition were frequently discussed and frequently answered with similar

comments. Farm conversion and farm transition in the uplands are most commonly affected by the relative high rate of residential growth. Farmers in these areas are very likely to feel that their operations will not be able to transition to the next generation because development value far exceeds the farm value of these properties. Furthermore, as land becomes fragmented and as agricultural operations come into conflict with new residential development, traditional farming becomes more difficult.

Farm uses in the upland that are more compatible with agricultural uses such as market gardening, nursery and greenhouse production, and equine operations, are thriving. In Orange County as in other parts of the nation, it is uncommon to find a significant number of traditional farmers, or their family members, transitioning between operations such as dairy to greenhouse and nursery production though there are some outstanding examples where this has happened. Such transitions by existing farmers tend to be more common in areas where the risk of success or failure is relatively known and where networks for farmer to farmer exchange of information, or other broad-based technical assistance, exist. Most new operations are started by new entrants to the industry or by relocating businesses. It is also important to remember that traditional upland farming, unlike these new operations, requires a much larger land base for row crop production and pasture.

Table 3: Building Permits and Housing Construction Costs for Selected Jurisdictions, 2002

	Orange County		Dutchess County		Ulster County	
	2002	10-Year Growth Rate	2002	10-Year Growth Rate	2002	10-Year Growth Rate
<b>Building Permits Issued</b>	<b>1,727</b>	<b>92%</b>	<b>909</b>	<b>15%</b>	<b>718</b>	<b>54%</b>
<b>Cost of Construction per Unit</b>	<b>\$152,561</b>	<b>69%</b>	<b>\$202,617</b>	<b>73%</b>	<b>\$179,549</b>	<b>89%</b>

Source: U.S. Census Bureau, Construction Statistics Division.

In the muck lands, which face almost no development pressure, conversion and transition issues are fundamentally different. Perhaps the biggest issue is successful intergenerational transfer. Within the region, intergenerational transfers and tax sales have caused single farms to be broken up into multiple parcels resulting in a patchwork of ownership. As successive generations get out of farming, they sometimes retain residual control, through resource ownership, in the farm, making on-farm investments, management decision-making, and further generational transfer a challenge. A second issue in the Black Dirt is an expected wave of competing recreational uses that cause land competition and promote incompatible uses.



## **The Land Base for Agriculture**

Agriculture relies on accessible and high quality natural resources such as soil and water. These resources are necessary for a healthy agricultural industry.

Soil quality is important in assessing agricultural productivity and remains relatively fixed over time. Orange County has a wide range of soil qualities and conditions, anchored by the highly productive muck lands or "Black Dirt" in the Towns of Warwick, Goshen, and Chester.

Orange County is just over 522,000 acres, of which 224,000 acres have a USDA land capacity classification of I through III, which are considered prime and productive soils. Of these soils, approximately 10,000 are found as muck soils in the "Black Dirt" regions. These Black Dirt soils are highly productive and suitable for production of a wide variety of vegetable and field crops. Within the "Black Dirt" regions, these soils are found in large contiguous blocks, and since these soils support little development potential, they will likely remain highly suitable for farming into the foreseeable future. Approximately 4,000 additional muck acres can be improved through drainage to achieve similar productivity capacity. Other soils with high land evaluation scores are scattered throughout the upland portions of Orange County, but are concentrated in upland valleys and throughout the Walkill River Valley. Based on data provided by the Orange County Department of Planning and interviewees, these upland soils are the most prone to development.

Orange County's prime agricultural lands in Classes I, II, and III total 224,000 acres (Classes I-III of seven classes are considered prime). Thus, prime and productive soils account for 43% of all soils in the County. Most of the soils are deemed prime to fair for one or more of the following: flowers, vegetables, or fruit and tree fruit production. Prime and productive soils are highly desirable for residential and commercial construction. These soils are present to some degree in almost every town with large blocks in Warwick, Goshen, Wawayanda, Minisink, Montgomery, and Newburgh. These towns are also under high development pressure.

**TABLE 4: AGRICULTURAL LAND INVENTORY BY TYPE AND TOWN GROWTH RATE**

Town	Agricultural Classification							Total
	Livestock/ Poultry	Equine	Dairy	Orchard/ Vineyard	Truck Crops	Nursery/ Greenhse.	Gen Ag Land	
Blooming Grove	564	45	310	75	0	0	1,977	2,970
Chester	861	150	790	0	273	69	378	2,520
Cornwall	465	100	0	87	0	16	695	1,362
Crawford	1,485	765	2,303	0	0	0	586	5,139
Deerpark	0	0	342	0	86	0	37	465
Goshen	2,601	777	3,376	35	4,617	0	1,440	12,844
Greenville	1,249	0	1,389	0	0	0	511	3,150
Hamptonburgh	1,245	1,772	1,025	236	0	45	1,068	5,391
Highlands	0	0	0	0	0	0	0	0
Minisink	472	88	3,249	45	566	0	3,337	7,758
Monroe	89	0	0	0	0	0	0	89
Montgomery	3,374	681	2,055	332	264	54	2,399	9,160
Mount Hope	487	129	1,141	0	0	49	394	2,200
Newburgh	166	0	28	705	0	0	313	1,212
New Windsor	903	0	759	246	94	36	432	2,470
Tuxedo	0	0	0	0	0	0	0	0
Walkill	2,899	253	2,527	0	177	108	627	6,591
Warwick	1,427	664	4,580	693	5,281	35	2,586	15,266
Wawayanda	683	258	1,552	418	2,942	98	1,179	7,129
Woodbury	157	0	0	0	26	19	0	201
<b>Total Ag Land</b>	<b>19,129</b>	<b>5,680</b>	<b>25,427</b>	<b>2,871</b>	<b>14,326</b>	<b>528</b>	<b>17,957</b>	<b>85,917</b>
<b>Ag Land in High Growth Towns</b>	<b>15,591</b>	<b>4,715</b>	<b>18,460</b>	<b>2,704</b>	<b>9,057</b>	<b>512</b>	<b>12,449</b>	<b>63,488</b>
<b>% Ag Land in High Growth Towns</b>	<b>82%</b>	<b>83%</b>	<b>73%</b>	<b>94%</b>	<b>63%</b>	<b>97%</b>	<b>69%</b>	<b>74%</b>

Sources: Orange County office of Real Property Services and Orange County Department of Planning.

Note: Agricultural classifications are based on Office of Real Property use codes. Codes have been aggregated.

Agricultural land is widely dispersed throughout the County. However, eight towns in central Orange County, a north-south corridor roughly bisected by the Walkill River, account for 80% of the County's agricultural land or approximately 69,300 acres. This corridor, along with parts of the town of Goshen and Chester, includes much of the County's prime "Black Dirt" or muck soils that are generally considered to be undevelopable. With the exception of the muck soils area, this part of the County is developing quickly contributing to a 20% decline in farmed acres since the late 1980's.

## Development Pressure

Orange County is currently undergoing an extraordinary growth phase that is expected to last through the next two decades. This condition is driven by several factors including regional population growth, radial growth from New York City with Orange County representing the outer ring of affordable single-family residences, and the fact that its southern neighbors such as Rockland, Putnam, and Westchester Counties are approaching build-out status. The population growth rate in Orange is projected to increase through 2020, with the greatest absolute and relative growth occurring outside of Orange's incorporated cities. The growth rate of Orange County's towns is expected to be nearly double the growth rate of the County as a whole with only five towns experiencing growth rates equal to or less than the overall growth rate of the County.

Table 5: Growth Rates of Orange County Towns

	Actual			Projected			
	1990	2000	Change from Prior Period	2010	Change from Prior Period	2020	Change from Prior Period
Blooming Grove	16,673	17,351	4%	22,376	29%	28,855	29%
Chester	9,138	12,140	33%	14,593	20%	17,541	20%
Cornwall	11,270	12,307	9%	13,943	13%	15,797	13%
Crawford	6,394	7,875	23%	9,257	18%	10,881	18%
Deerpark	7,832	7,858	0%	8,483	8%	9,157	8%
Goshen	11,500	12,913	12%	14,302	11%	15,842	11%
Greenville	3,120	3,800	22%	4,539	19%	5,421	19%
Hamptonburgh	3,190	4,686	47%	5,456	16%	6,353	16%
Highlands	13,667	12,484	-9%	14,318	15%	16,422	15%
Minisink	2,981	3,585	20%	3,966	11%	4,388	11%
Monroe	23,035	31,407	36%	43,300	38%	59,697	38%
Montgomery	18,501	20,891	13%	23,976	15%	27,516	15%
Mount Hope	5,971	6,639	11%	7,892	19%	9,382	19%
Newburgh	24,058	27,568	15%	34,489	25%	43,148	25%
New Windsor	22,937	22,866	0%	30,099	32%	39,621	32%
Tuxedo	3,023	3,334	10%	3,572	7%	3,826	7%
Wallkill	23,016	24,659	7%	31,499	28%	40,237	28%
Warwick	27,193	30,764	13%	36,343	18%	42,934	18%
Wawayanda	5,518	6,273	14%	7,226	15%	8,324	15%
Woodbury	8,236	9,460	15%	11,529	22%	14,049	22%
<b>Town Total</b>	<b>247,253</b>	<b>278,860</b>	<b>13%</b>	<b>341,158</b>	<b>22%</b>	<b>419,391</b>	<b>23%</b>
<b>Orange County</b>	<b>307,647</b>	<b>341,367</b>	<b>11%</b>	<b>386,215</b>	<b>13%</b>	<b>436,954</b>	<b>13%</b>

Note: Town data excludes incorporated cities of Newburgh, Middletown, and Port Jervis,

Source: Orange County Planning Department

It should be noted that population projections are developed by a formula that considers birth and death rates, in and out migration trends, and historical growth. They do not take into account the actual zoned-but-unbuilt 'capacity' of a jurisdiction, nor the effect of environmental limitations to building on the remaining undeveloped land.

Much of the growth in population is accommodated with single-family housing. In fact, 2002 permit data provided by the U.S. Census Bureau, indicates that single-family building permits were issued at a rate of 265:1 over two family permits in Orange County's towns. Based on interviews and surveys with town officials, much of the single-family development is occurring on large lots of two acres or more meaning that nearly 1,000 acres of land is converted for every 500 new homes. In order to accommodate infrastructure improvements that accompany this growth several towns including Montgomery and Goshen have instituted temporary moratoria on new subdivisions.

The implications for agriculture are clear. Towns within the commuter corridors and adjacent to employment zones are experiencing high growth. Many of these towns such as Warwick and Montgomery also have high concentrations of agricultural land. As development pressure builds, these prime agricultural areas become threatened as land values rise and incompatible residential uses are scattered throughout areas of formerly concentrated agricultural activity.

Table 6: Single Family Building Permits by Town

<b>Towns</b>	<b>Agricultural Land</b>	<b>2002 Single Family Building Permits Issued</b>	<b>% of Town Permits Issued</b>
Blooming Grove	2,970	26	4.39%
Chester	2,520	20	3.38%
Cornwall	1,362	30	5.07%
Crawford	5,139	39	6.59%
Deerpark	465	37	6.25%
Goshen	12,844	18	3.04%
Greenville	3,150	21	3.55%
Hamptonburgh	5,391	32	5.41%
Highlands	0	1	0.17%
Minisink	7,758	7	1.18%
Monroe	89	12	2.03%
<b>Montgomery</b>	<b>9,160</b>	<b>33</b>	<b>5.57%</b>
Mount Hope	2,200	20	3.38%
Newburgh	1,212	96	16.22%
New Windsor	2,470	45	7.60%
Tuxedo	0	5	0.84%
Walkkill	6,591	44	7.43%
<b>Warwick</b>	<b>15,266</b>	<b>64</b>	<b>10.81%</b>
Wawayanda	7,129	31	5.24%
Woodbury	201	11	1.86%
<b>Town Total</b>	<b>85,917</b>	<b>592</b>	<b>100.00%</b>
<b>Orange County</b>	<b>86,765</b>	<b>1,727</b>	

Note: Town Total excludes property within city borders.

Sources: Orange County office of Real Property Services and U.S. Census Bureau, Construction Statistics Division.

Conversion of farmland to housing affects County and town fiscal conditions. In general, most residential housing does not generate as much revenue to a jurisdiction as it costs to provide all public services to it. Commercial development and farmland usually subsidize residential development to varying degrees. This makes farmland, even with a preferential tax assessment (or exemption), a net fiscal positive and in many cases a preferred land use. "Cost of Community Services" studies commissioned by the American Farmland Trust have found this to be the case.

"Cost of Community Services" (COCS) studies are a case study approach used to determine the average fiscal contribution of existing local land uses. COCS studies involve three basic steps with local oversight: 1) data on local revenues and expenditures is collected; 2) revenues and expenditures are grouped and allocated to the community's major land use categories; and 3) data is analyzed and revenue-to-expenditure ratios are calculated for each land use category. This last step requires significant research, including extensive interviews with financial officers and public administrators.

The American Farmland Trust reviewed COCS studies conducted throughout the nation over 15 years prior to 2002 and found that agricultural land is similar to other commercial and industrial land uses in that it generates a fiscal surplus whereas residential use creates a deficit. *The purpose of this analysis was not to demonstrate that one land use is preferable to another, but simply that agricultural land use can be used by municipalities to help balance local budgets just as commercial and industrial land use is used to do.*

Based on their analysis of the median cost of community services relative to real property tax contributions by land use, the American Farmland Trust found that commercial/industrial land use cost 27 cents per dollar of revenue raised, followed by working lands/open space and residential at 36 cents and \$1.16 respectively. The figure for working lands/open space was based on actual assessments including assessment for current agricultural use or agricultural exemption.

## **Land Use Regulations**

Most towns in Orange County are making an attempt to deal with rapid suburban development through land use control policies. In many towns with any significant agricultural industry presence, agriculture plays at least some role in balancing future land uses from a fiscal and economic perspective. The maintenance of farmland as an open, working landscape results from the economic use of the land for agricultural purposes. Towns can take this into consideration as they develop their land use control policies just as they do when planning for residential, commercial or industrial development. They take into account the nature of the planned use, the compatibility of adjoining uses and the respective demand for public services of those uses.

Most town planning begins with the town's comprehensive plan. Based on interviews with town officials, as well as the results of a short mail survey, many towns are in the

process of updating their comprehensive plans and they are only now beginning to address agriculture within these plans. Of the 13 survey responses received during the Fall of 2003 by the consultants who developed the Agricultural Economic Development Strategy, only five towns were addressing agriculture through the existing plan (Crawford, Warwick, Deerpark, Montgomery, and Minisink).

Beyond the comprehensive plan, a handful of towns, mostly within the central agriculture corridor defined above, have proactive agricultural policies ranging from town level agricultural and farmland protection programs, cluster development, right-to-farm provisions, notification of new residents that they are moving into an agricultural production area, and business recruitment and attraction strategies.

Zoning is, by far, the land use regulation that most impacts farming. Most Orange County towns currently set the lowest residential density of one dwelling per one acre (1:1) to one per four acres (1:4). With regulation of minimum residential lot size, zoning can set up housing densities that compromise the land base or, *if properly timed*, it can keep residential development sufficiently low to allow agriculture to continue. As the Agricultural and Farmland Protection Board learned through the Agricultural Economic Development Strategy process, efforts to change densities at this level are also likely to alienate farmers and turn them against other public policies that may have a positive impact on local farming operations. Choices made in zoning can drive up land values, making farm expansion impossible. This effect coupled with the aforementioned characteristics of Orange County's farming population (e.g. aging farmers, the transitioning agricultural economy, the challenge of intergenerational transfer) can make selling the land for development irresistible.