

# **CHAPTER 1: AGRICULTURAL LAND BASE AND INDUSTRY OVERVIEW IN HUNTERDON COUNTY**

Hunterdon County's agriculture is marked by certain characteristics that have remained consistent over the past couple of decades - if not more. These characteristics include a diversity in agriculture, including hay, feed corn, horses, cattle, specialty crops and animals; an abundance of small to moderately sized farms; and a large percentage of part-time farmers. The most significant agricultural issues in Hunterdon County are the costs of farming, continued development pressure, and competition from other agricultural areas. These issues, combined with the rising age of the average farmer, have resulted in the decline of agriculture as a full-time business.

## **Agriculture in Hunterdon County**

### ***Agricultural Land Base***

Hunterdon County has a total of approximately 280,450 acres of which approximately 127,043 acres is farmland assessed according to the 2005 NJ Farmland Assessment. This amounts to 38.95% of the total acreage of the County and 13.6% of the New Jersey's total farmland. Much of Hunterdon County's farmland is located through the center as well as the easterly and southern portions of the County. The productive farms closely follow the locations of the Statewide and Prime soils that are classified for farming.

Hunterdon County is comprised of about 106,150 acres or 38% of Statewide important soils, 76,280 acres or 27% of Prime soils, 85,660 acres or 31% of soils that are not important to farming as well as 12,357 acres or about 4% of soils that were not rated by the National Resource Conservation Service. The Prime and Statewide soils are mainly located along the center of the County as well as toward the west and eastern borders providing a good agricultural soil base for farmers to utilize.

(Please see Map 1, located in the appendix.)

Of the over 82,000 acres of total active agricultural lands as defined by the 2002 NJ Department of Environmental protection Land Use Land Cover data, 35,318 acres are comprised of Statewide soils. About 33,569 acres are comprised of Prime soils. The remaining acreage was either not rated or comprised of other, not important soils. The following chart indicates, by municipality, the amount of active agriculture acreage in Hunterdon County.

<b>Municipality</b>	<b>Active Ag Acreage</b>
Alexandria Township	7232
Bethlehem Township	3010
Bloomsbury Boro	162
Califon Boro	31
Clinton Town	120
Clinton Township	4025
Delaware Township	9680
East Amwell Township	7996
Flemington Boro	4
Franklin Township	6953
Frenchtown Boro	64
Glen Gardener Boro	80
Hampton Boro	245
High Bridge Boro	30
Holland Township	4238
Kingwood Township	7797
Lambertville City	3
Lebanon Boro	36
Lebanon Township	3621
Milford Boro	92
Raritan Township	5534
Readington Township	8127
Stockton Boro	50
Tewksbury Township	5896
Union Township	3030
West Amwell Township	4024

Almost as important, if not more so, to farming as soils is water resources. About 1514 farms were utilizing the county soils in 2002 and 114 of those farms were irrigated totaling approximately 1058 acres of irrigated farmland in Hunterdon County according to the 2002 Census of Agriculture. The water sources that are currently tapped for irrigation include local wells, the Delaware River, the South Branch of the Raritan River, and various other water sources throughout the County. The Highlands Act has worked toward protecting the water resources of that very important region.

In order to address the requirements and goals of the Highlands Act, the Highlands Council analyzed the natural water sustainability of the Highlands Region to determine the amount of water required to protect aquatic ecological integrity and the amount “available” for water supply, and commercial, industrial, or agricultural uses. Where net water availability is negative, the sub-watershed is deemed a Current Deficit Area, meaning existing uses are exceeding sustainable supplies.

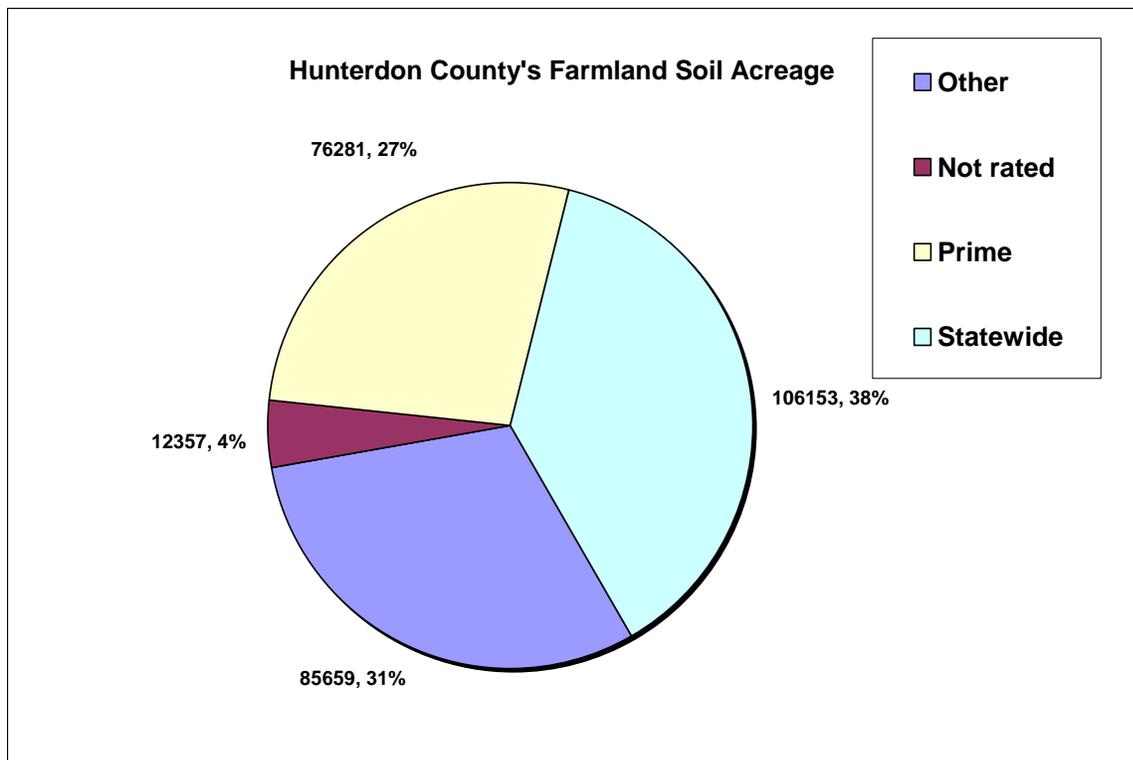
The physical infrastructure defines the limits for water delivery that are inherent to the system, while the NJDEP water allocation permits and associated limitations in water availability define the limits for water supply that are inherent to the water resources (e.g., aquifer, reservoir system).

The technical approach used by the Highlands Council for the Draft RMP (the Low Flow Margin (LFM) method, the calculation of consumptive and depletive water uses, and the use of the EcoFlow Goals approach to provide a basis for certain thresholds) is consistent with the methods being used by the NJDEP for the next New Jersey Statewide Water Supply Plan.

The Highlands Council is proposing the following water availability policy:

1. Assign water availability thresholds to entire HUC14 sub-watersheds rather than zones within sub-watersheds, based on the dominant Land Use Capability Zone (>75% of the sub-watershed) or on the Watershed Condition Indicator (High corresponding to the Protection Zone policy, Moderate to the Conservation Zone policy, Low to the Existing Community Zone policy).
2. Protect water supply safe yields from new consumptive and depletive water uses through a cross-reference to NJDEP water allocation regulations.
3. Provide limited, conditional water availability in deficit sub-watersheds. Realization of this availability would be conditioned upon 125% mitigation
4. For HUC14 sub-watersheds upstream of deficit sub-watersheds a policy of a 5% LFM, above current consumptive and depletive water uses (but not to exceed the standard thresholds).
5. Distribute available water within a HUC14 sub-watershed on the basis of RMP development and redevelopment potential.

There are currently no guidelines in the Highlands proposed policy for water allocation that specifically addresses water allocation policies for agricultural purposes in the Highlands. These policies, as noted above are strictly based on general HUC14 sub-watershed thresholds and deficit areas. There is no mention in these policies, for example, how agricultural water permit requests will be prioritized versus permit requests for residential development.



Source: NRCS SSURGO Version 2 soils

## *Diverse Agriculture*

Agriculture in Hunterdon County has traditionally been diverse. In an interview, a N.J. Farm Bureau staff person explained how, for example, Cumberland County was largely vegetables, Salem County was corn and Hunterdon County was "very diverse". The diversity ranges from hay production, feed corn, horses, and cattle, to sheep, nurseries, grapes, and specialty crops and animals. The agricultural diversity is largely due to the above average soils that accommodate a variety of agricultural uses, the relatively good climate, and the combination of part-time and full-time farmers that are interested in various types of agriculture.

Of the approximately 280,000 acres that make up Hunterdon County, 131,572 acres or 47.8% of the land is farmland assessed according to the 2004 NJ Farmland Assessment. The majority of the farmland assessed acres are in active agriculture with a total of 84,844 acres. Harvested Cropland took up the greatest amount of active agriculture land with 59,113 acres, followed by Permanent Pasture with 16,888 acres and Cropland Pastured with 8,843 acres. This total number is down from the 1983 total of 102,449 acres in active agriculture.

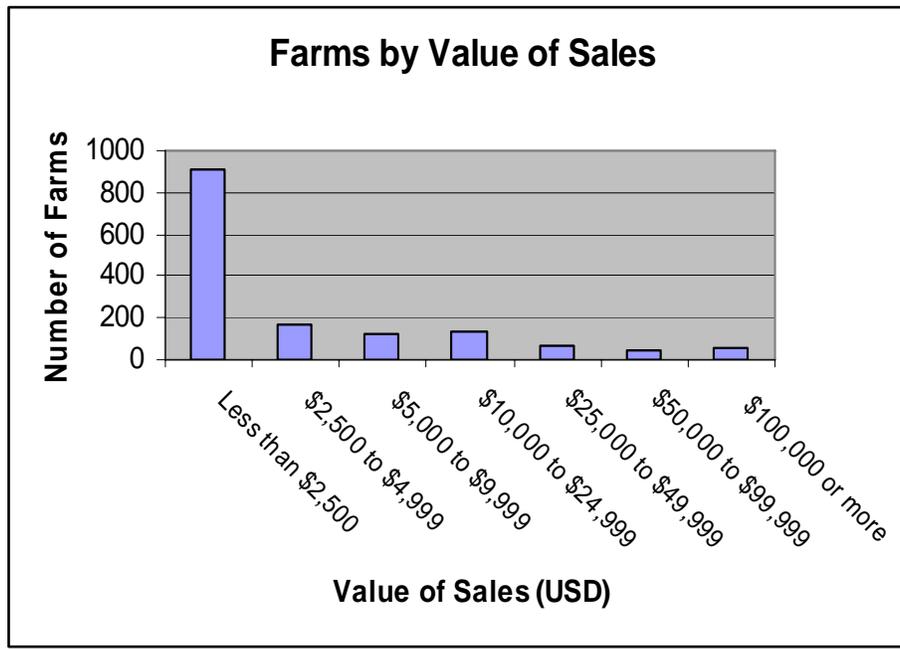
The total amount of land available for agricultural use including woodland and equine acreage is also down from the 142,240 acre figure in 1983 with a total 131,572 acres for agricultural use according to the 2004 NJ Farmland Assessment. The total woodland figure for agricultural use is 45,983 acres, about 35% of the total amount of land for agricultural use in the County. This amount of woodlands is equal to the figure from the 1990 NJ Farmland Assessment; however the proportion of unattached woodland to attached woodland has evened out as of 2004. Equine acreage is up sharply from the 2000 figure of 542 acres to 745 acres in 2004.

Field crops dominate the land in active agriculture as the type of farming done in the county in 2004 with 49,430 acres; however the remaining acreage is divided among various other diverse forms of agriculture. Nursery operations used the second greatest amount of acreage for farming in 2004 with 3,681 acres. Vegetables were ranked third in the amount of acreage used with 1,006 acres. The remaining acreage was divided among cover crops, fruit, berries and grapes. The top five agricultural commodities of Hunterdon County reflect this diversity as well. The top commodity is nursery stock followed by hay and similar crops. The third commodity is horses, followed by grains and finally vegetables.

Value of Crops for Hunterdon County:

The Hunterdon County market value for all products sold in 2002 was \$ 42,267,000 dollars. The average amount of product sold per farm in Hunterdon County was \$27,917 dollars.

The breakdown for crops yields only was \$34,707,000 dollars. The breakdown for livestock and poultry products was \$7,560,000 dollars.



Source: 2002 USDA Census of Agriculture

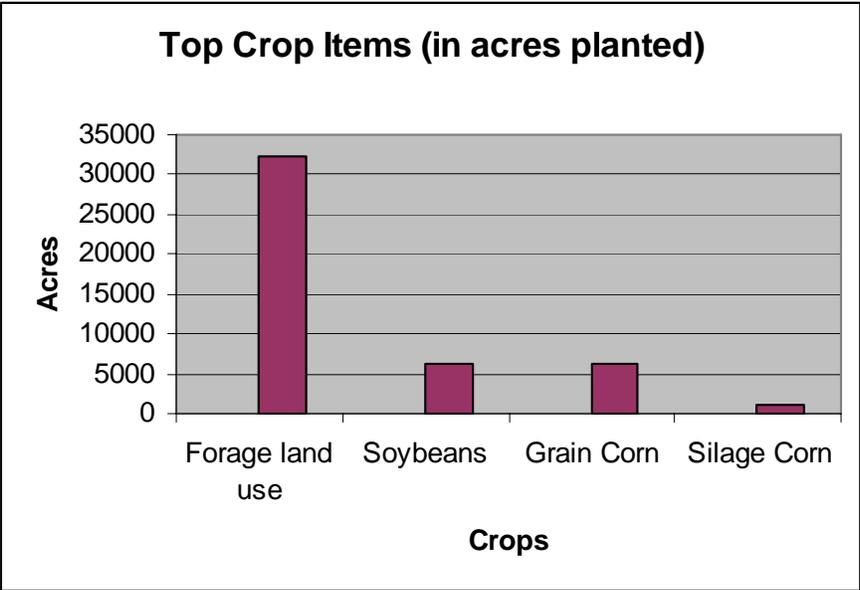
***Snapshot of farming production in Hunterdon County:***

<b><i>Production Type</i></b>	<b><i>Number of Farms</i></b>
Grain Corn	90
Silage Corn	25
Wheat for Grain	56
Winter Wheat	56
Oats for Grain	23
Barley for Grain	7
Sorghum for Grain	8
Soybeans	58
Vegetables harvested for sale	101
Potatoes	8
Chickens	26
Cattle and Calves	295
Hogs and Pigs	67
Sheep and Lambs	235

Source: USDA 2002 Census of Agriculture

***Hunterdon County as compared to other counties in NJ:***

Hunterdon County leads the state in many agricultural areas. Hunterdon ranks number 1 for total farms with 1,514. Sussex County ranks second with 1,029 farms. According to the 2002 census of agriculture, Hunterdon was number 1 in the state for total acreage in farming with 109,241 acres. Warren County was ranked second with 78,042 acres.

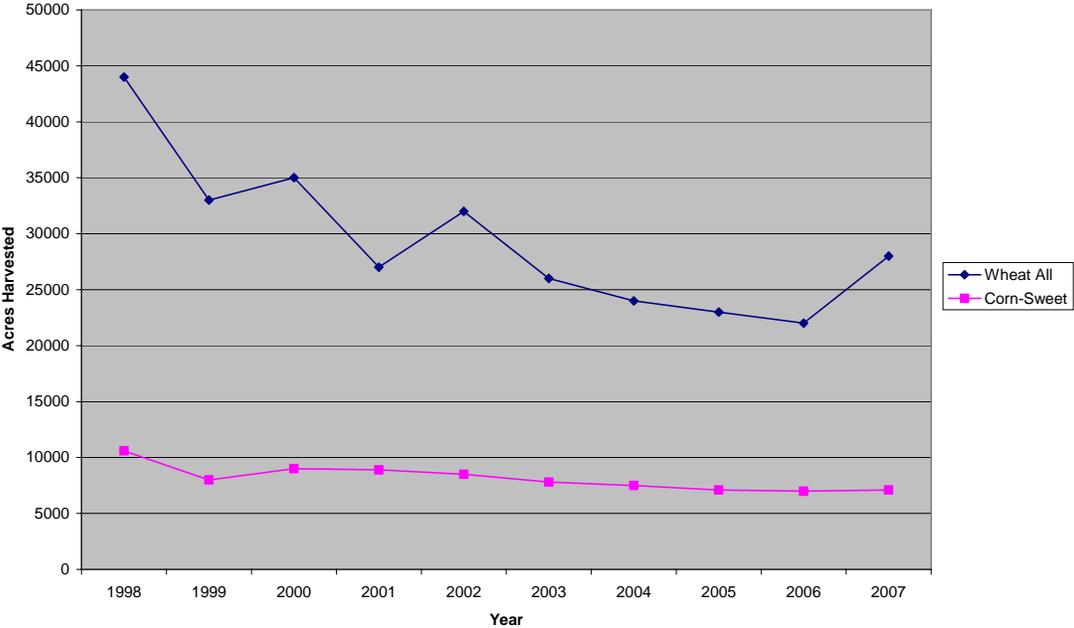


Source: 2004 NJ Farmland Assessment

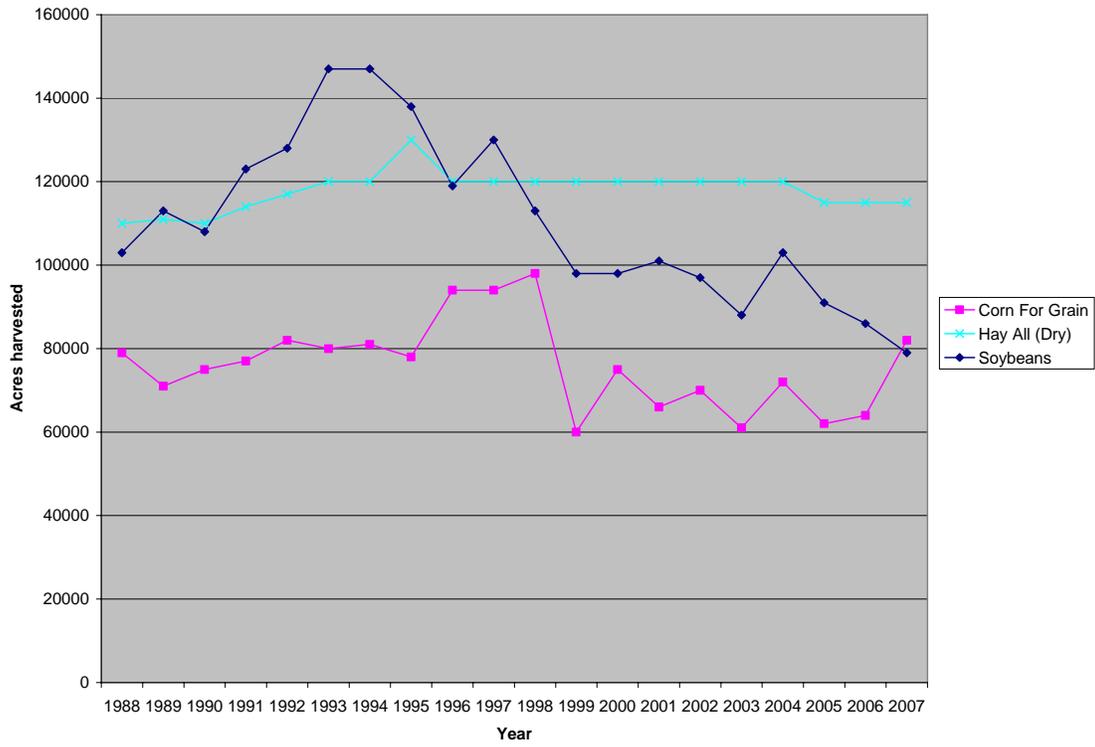
***Crop Production and Market Value Trends over the Last 20 Years***

As indicated in the tables below, the statistics for the top crops that were in production over the last 20 years show a rise in market value as production has fallen.

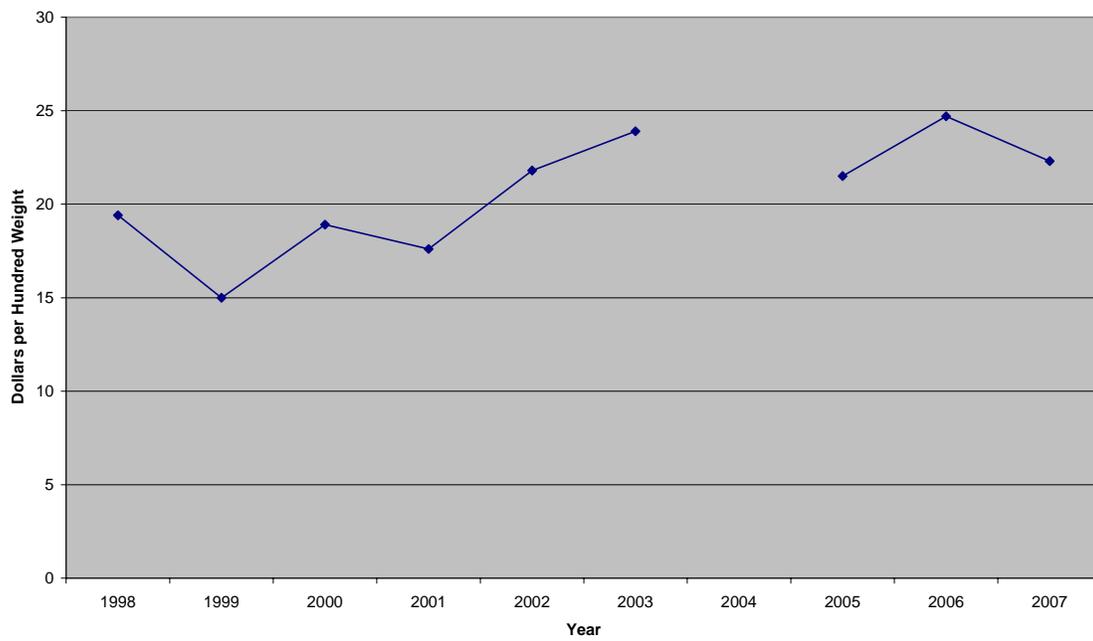
**Crop Production**



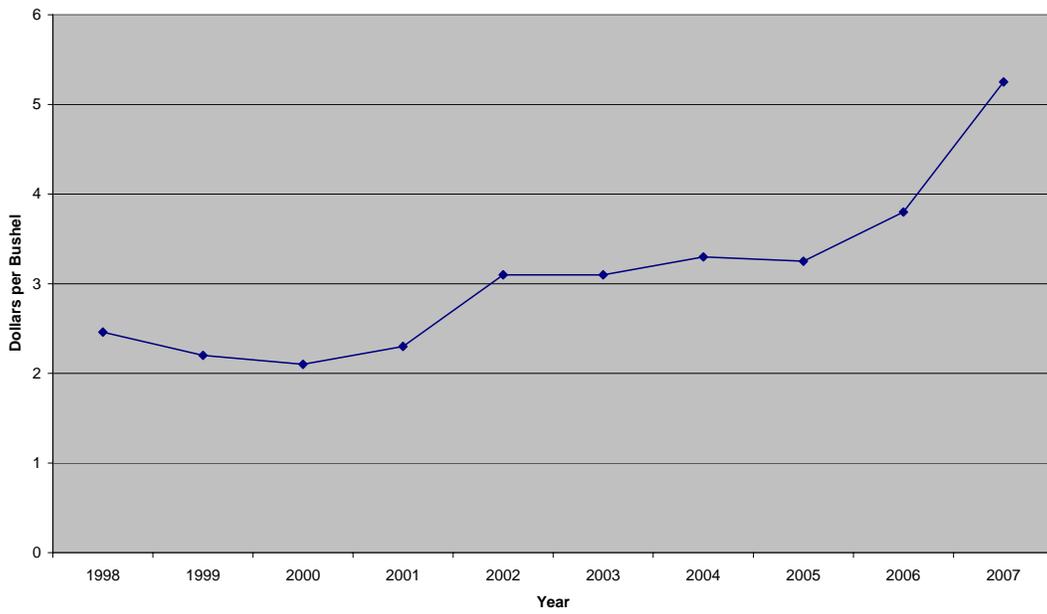
### Crop Production



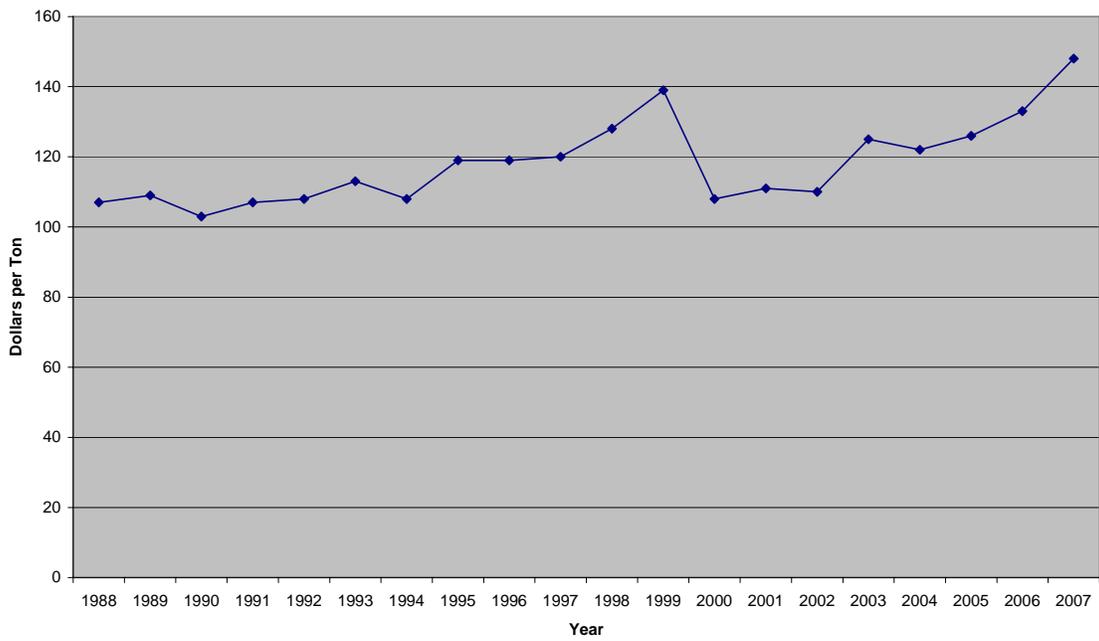
### Sweet Corn Prices



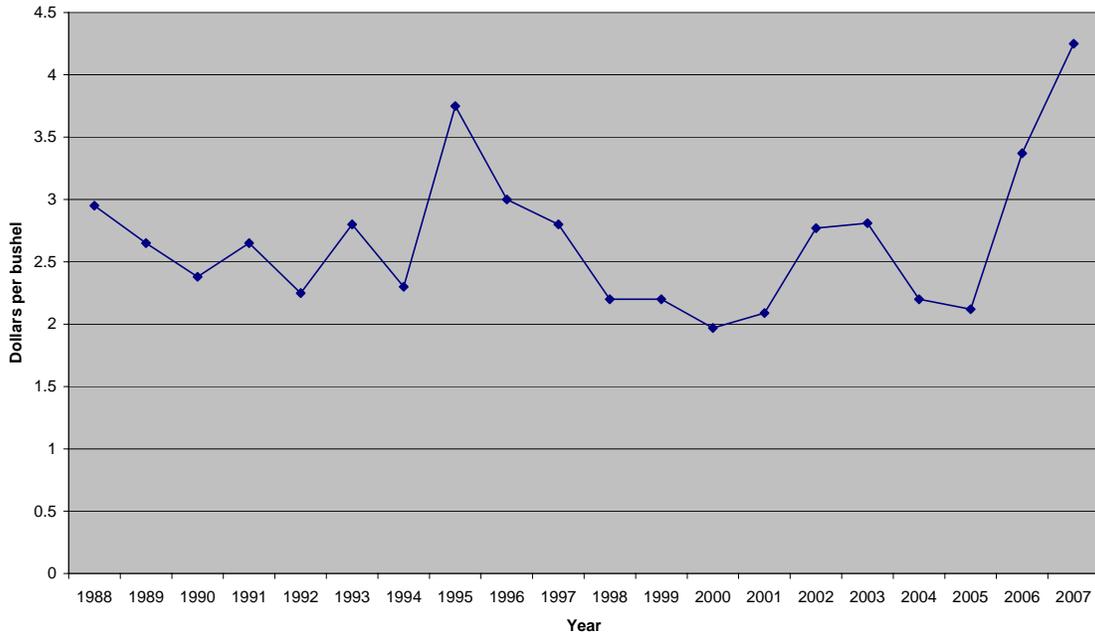
### Wheat (all) Prices



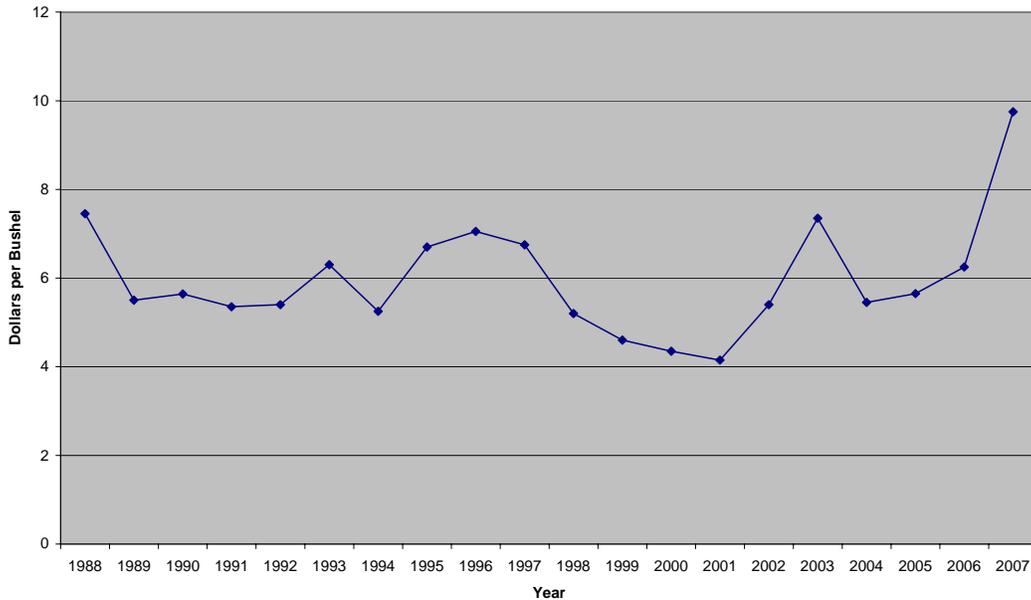
### All Hay (dry) Prices



### Corn for Grain Prices



### Soybean Prices



Source: National Agriculture Statistics Service – New Jersey

Livestock trends are also telling of the shift in agriculture within the county over the years. Where in 1997, there were 8,095 farms in Hunterdon County that sold livestock, poultry and their associated products, that number has dropped to 7,560 farms in 2002 according to the Census of Agriculture. Statewide, the number of livestock farms was stable compared to Hunterdon County, with 3,825 farms in 1987, 3,605 in 1992 and 3,228 farms in 1997.

When these figures are broken down by type, it is more telling as to where this shift in livestock has occurred. The number of dairy farms in Hunterdon County has decreased from 30 in 1997 to only 10 dairy farms in 2002 while the number of poultry and egg farms has increased from 107 in 1997 to 151 farms in 2002. The amount of pig and hog farms has remained stable from 1997 with 66 farms with only a loss of 1 farm in 2002.

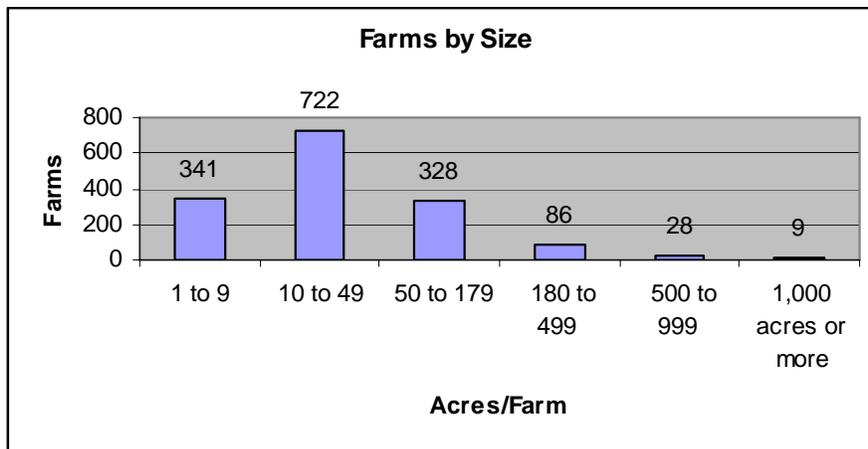
The value amount of dairy products has dropped along with the loss of local Hunterdon County dairy farms. In 1997 there were \$2,802,000 in sales of dairy products and only \$1,520,000 in 2002 according to the Census of Agriculture. This number is in sharp contract to the value amount seen in 1987 with \$6,484,000. The value amount for hogs and pigs sold has likewise fallen, with \$516,000 in 1987 and only \$255,000 in 1997, dropping further to \$113,000 in 2002.

This shift in farming practices also has an impact on the land needed for the type of production.

***Small to Moderately Sized Farms***

There are 109,241 acres of active farmland that comprise the 1514 farms in the county. The number of farms has grown since 1982 when the number of farms totaled 1180. The total acreage has been reduced however, shrinking from greater than 120,000 acres to the current 109,241 acres. This supports Hunterdon County's agricultural diversity and how it has been accomplished on relatively small to moderately sized farms. Contrary to the current national trend in agriculture towards larger, consolidated farms, the trend in Hunterdon County and throughout most of New Jersey is the reverse.

In 1982, the average size of a farm in the County was 102 acres, which dropped to 72 acres in 2002, according to the U.S. Census of Agriculture. More telling of the typical farm is the median size which, in 2002 was 24 acres down from 27 acres in 1997. This number is reflected in the breakdown of Hunterdon County farms by size: 341 farms between 1 - 9 acres, 722 farms between 10 – 49 acres, 328 farms between 50 – 179 acres, 86 farms between 180 – 499 acres, 28 farms between 500 – 999 acres, 9 farms between 1000 – 1999 acres and 2 farms that are greater than 2000 acres. The decreasing average farm size is due to the loss of large farms and the significant increase in small, "part-time" farms.



### ***Part-time Farmers***

The increase in the number of small farms can largely be attributed to two reasons. One, in Hunterdon County there has historically been a large number of part-time farmers - people who derive the majority of their income from non-farm related work. A combination of the rural and scenic qualities of Hunterdon County and interstate access to major employment areas has made it a popular place to farm "a few acres" for enjoyment. People who enjoy the rural lifestyle are able to commute to work and come home and enjoy their "part-time farms". Part-time farmers do not need a minimum farm size for income and large farms tend to be too much to manage - thus, the smaller farm. The predominance of part-time farmers is also a result of farmers not being able to make enough profits for a full time occupation.



Whereas the ratio in other New Jersey counties of full-time farm operators to part-time farmers is 1:1 or 2:1, in 1997 Hunterdon County had a full-time to part-time ratio of 1:2, meaning there were half as many full-time farmers as part-time farmers. In recent years, according to the 2002 US Census of Agriculture, that ratio has leveled off to more echo the statewide numbers that are closer to a 1:1 ratio. In 2002, of the 1514 farm operators in Hunterdon, 52.8% do not claim farming to be their principal occupation, according to the U.S. Census of Agriculture. In fact, since 1974, the majority of Hunterdon County's farms were farmed by part-time farmers, however this most recent survey in 2002 shows a significant increase in the amount of full-time farm operators than the Census of Agriculture has shown historically.

### ***The Cost of Farming***

Large farm operations, particularly dairy and grain operations, have been declining in Hunterdon County for several decades. The price of dairy and grain commodities has been relatively low over these years and contributes to low and/or unpredictable farm incomes. Over the last two decades, milk and grain prices fluctuated but never increased in proportion with the cost of living in Hunterdon County until recently. In 1980, the price paid to farmers for milk was \$13.38/cwt; in 1990 it was \$15.30/cwt and in 1995, it was \$13.30/cwt. In June of 2007, the price received for milk showed significant increase up to \$20.20/cwt. For feed corn, farmers received \$3.59/bushel in 1980; \$3.00/bushel in 1990 (June) and \$2.50/bushel in 1995 (June). In June of 2007 the price per bushel has skyrocketed to \$3.51. This rise has closely followed the rise in corn used for ethanol production for addition to gasoline. This change in the market is felt throughout various agricultural products, as some farmers are abandoning previously profitable crops to take advantage of the high prices for others. Some farmers adopted new farming strategies that either increased crop yields or profit margins; others shifted directions in farming and chose new, more profitable products as a result of the new price increases for different products. Typically the latter requires investments and risks that many farmers, unfortunately, can not afford because of either retirement or financial needs.

While farm income has been relatively low, farm production costs continue to be high for farmers. New Jersey has been described as having the highest cost of farming in the country. In 1997, the average farm production expenses were \$24,601, which represents a sizeable portion of

the \$27,461 average dollar amount of agricultural products sold. That number has not changed much according to the 2002 US Census of Agriculture with a \$27,917 average dollar amount of agricultural products sold. The largest category of production expenses in Hunterdon County is property taxes, due to high property values. Other large categories of farm production expenses include the cost of hired labor, feed for livestock, and repair and maintenance of buildings and equipment.

### ***Agricultural Support Services***

Due to the rural nature of Hunterdon County and the intensity of agriculture in the region, there are a number of businesses that have located themselves within easy reach of the local farmers. Various farm equipment dealers are located in the area to sell new equipment and service existing as well, such as 4-T's Farm, Powerco, Inc., and D&R Equipment Inc. There are also used equipment dealers located in the area that provide a lower cost alternative to buying new equipment.

Along with the equipment dealers, seed suppliers are also located within the area to provide farmers with close support for their planting needs. Alliance Seed Incorporated, Farmer's Brokerage & Supply, Inc., National Seed Co. of NJ, Inc, United Horticultural Supply are some of the seed suppliers in the area. Closely associated with the seed suppliers are the suppliers of products that help protect the crops such as pesticides. There are various companies that provide pesticides as well as aerial applications of such. Much of these businesses are moving toward more nationally based outfits with the ease of transport and ordering through the internet. This creates an opportunity for greater diversity in products made available to local farmers that normally would not be exposed to such a wide array of products.

Local auctions are also a great service that allows for the sale and trade of agricultural goods at the local level. Many are held in the area that allow for local products to be concentrated within the area to the benefit of neighboring farmers. In addition to the available auctions, farm markets are also a great outlet for local farmers and their use is on the rise in Hunterdon County.

Many farmers would like to see more support services in the area, however they recognize the change in the business and the trend toward a more internet-based industry. With the continued growth of internet only businesses and the ease of shipping through major companies, as needs expand farmers will look more toward businesses that may not be located nearby. Rutgers Cooperative Extension of Salem County has put together a document listing those service providers that are available to New Jersey farmers. This can be found at the following address: <http://saalem.rutgers.edu/greenpages/service.pdf>

### ***Supplemental on-farm income***

Many farmers are supplementing their farm incomes with *farm-related* and *non-farm related* businesses and activities. This is happening not only in Hunterdon County, but throughout the country. According to the FARMs Commission report, November, 1994, supplemental *farm-related* income on New Jersey farms includes hunting/fishing; leaf composting; farmstand marketing; picnic facilities; pick-your-own operations; petting zoos; hay rides; farm tours; and bed and breakfasts. Hunterdon County farmers are including many of these activities in their farm operations, particularly hay rides, pick-your-own operations, corn mazes, and farmstands. *Non-farm* businesses are an additional source of income for farmers. In Hunterdon County, *non-farm* businesses include school bus drivers, vehicle repair shops, arbor businesses and construction and excavating companies.

### ***Development pressure***

Development pressure continues to be a problem for Hunterdon County farmers. Hunterdon County has had the second fastest rate of residential growth in the State since 1980. According to the US Census for the period 1980 to 1990, the average annualized growth rate for Hunterdon County was 2.1%, second only to Ocean County. For the period from 1990 to 1995, the County's average annualized growth rate was 1.5%, which was second only to Somerset County. Similarly, the statewide average annualized growth rate was .5% for both periods. During this period, real estate developers aggressively solicited the interest of farmers to sell their land through letters, phone calls and door-to door visits. This is still true today. Many large developers offer down-payments to landowners in exchange for contracts to sell their farmland after subdivision approvals have been secured. This process can take up to several years, but the money initially paid to the landowner makes the offer attractive. Such offers are difficult for some farmers to resist if profit margins have been low or retirement is near.



New residential development also presents other problems. Residences and farms are not ideal neighbors. Nuisance suits, trespassing, noise and pollution complaints, and liability issues are all common problems when farms are surrounded by residential developments. The population of Hunterdon County has almost doubled in size in 25 years with a population of just over 130,000 in 2005 as compared to approximately 87,000 people residing in the county in 1980. Right-to-farm laws have attempted to address this issue and these laws have been recently strengthened. Municipalities have attempted to curb this trend as well by introducing zoning that requires larger lot sizes or encourages cluster developments.

### ***Aging farmer***

The average age of Hunterdon County's farmers has been increasing for the last 25 years. In 1969, the average age of the County's farmers was 52.7. Although it decreased slightly over the next 10-12 years, it has increased since then. As of 2002, the average age of the farmer was 56. The aging farmer contributes to the agricultural picture in Hunterdon County. With the average farmer close to retirement, there is little room for taking risks and making investments to adapt to a changing industry. Therefore, if profit margins are minimal, the path of least resistance is often the sale of the farm. Some farmers hold on to the land and bequeath it to their children. However, with the current estate tax laws, even this can be a costly endeavor. Farmers' children are also losing interest in farming as an occupation as they leave the farm to pursue more profitable jobs.