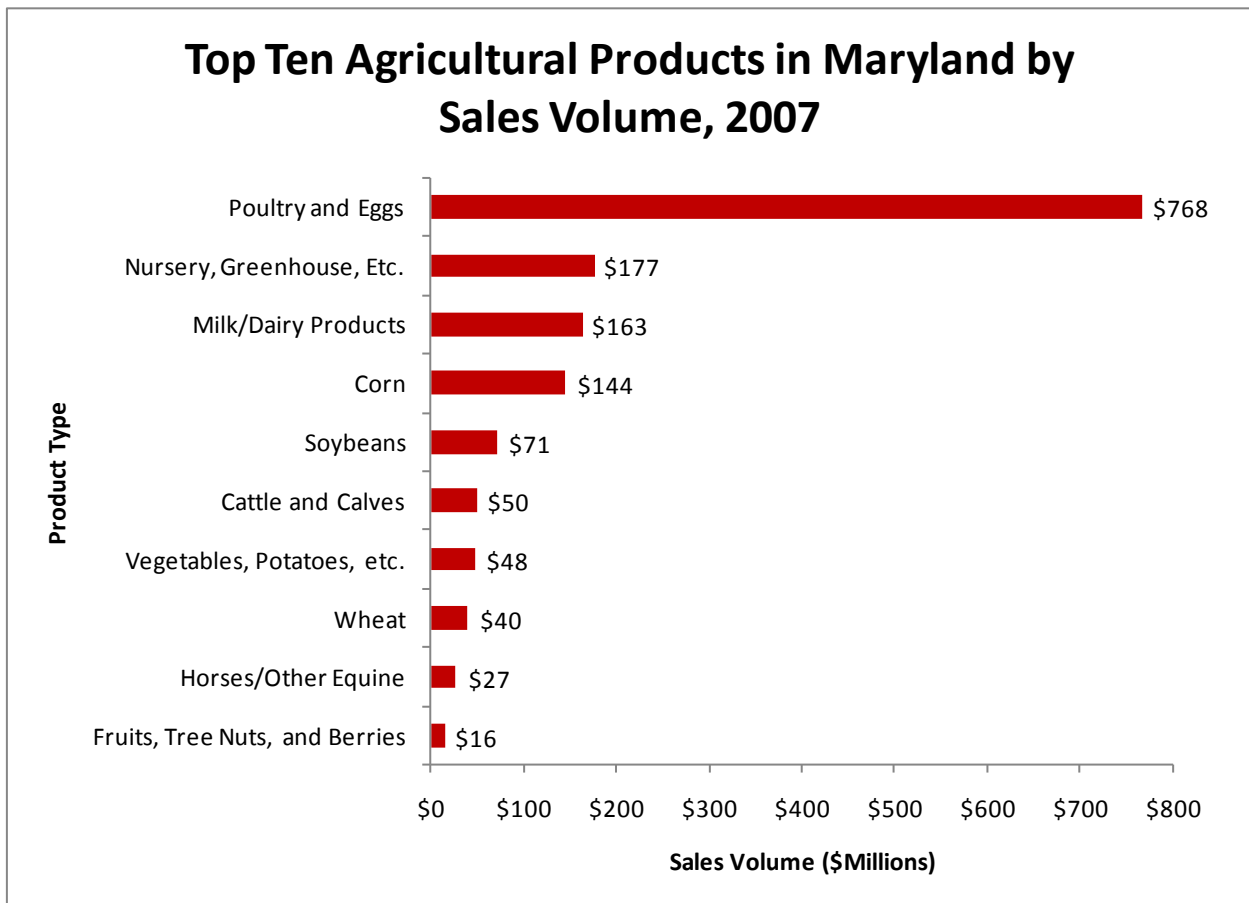


The 2007 Census of Agriculture: Farm Sales and Production in Maryland

Introduction

Sales of crops and livestock from Maryland’s farms increased more than 20 percent between 2002 and 2007, even after adjusting for inflation, according to the most recent Census of Agriculture published by the U.S. Department of Agriculture.¹ Maryland’s farmers sold \$1.6 billion in crops and livestock in 2007, \$310 million more than the \$1.29 billion sold in 2002. This was the first increase in the value of farm products sold in at least 30 years.

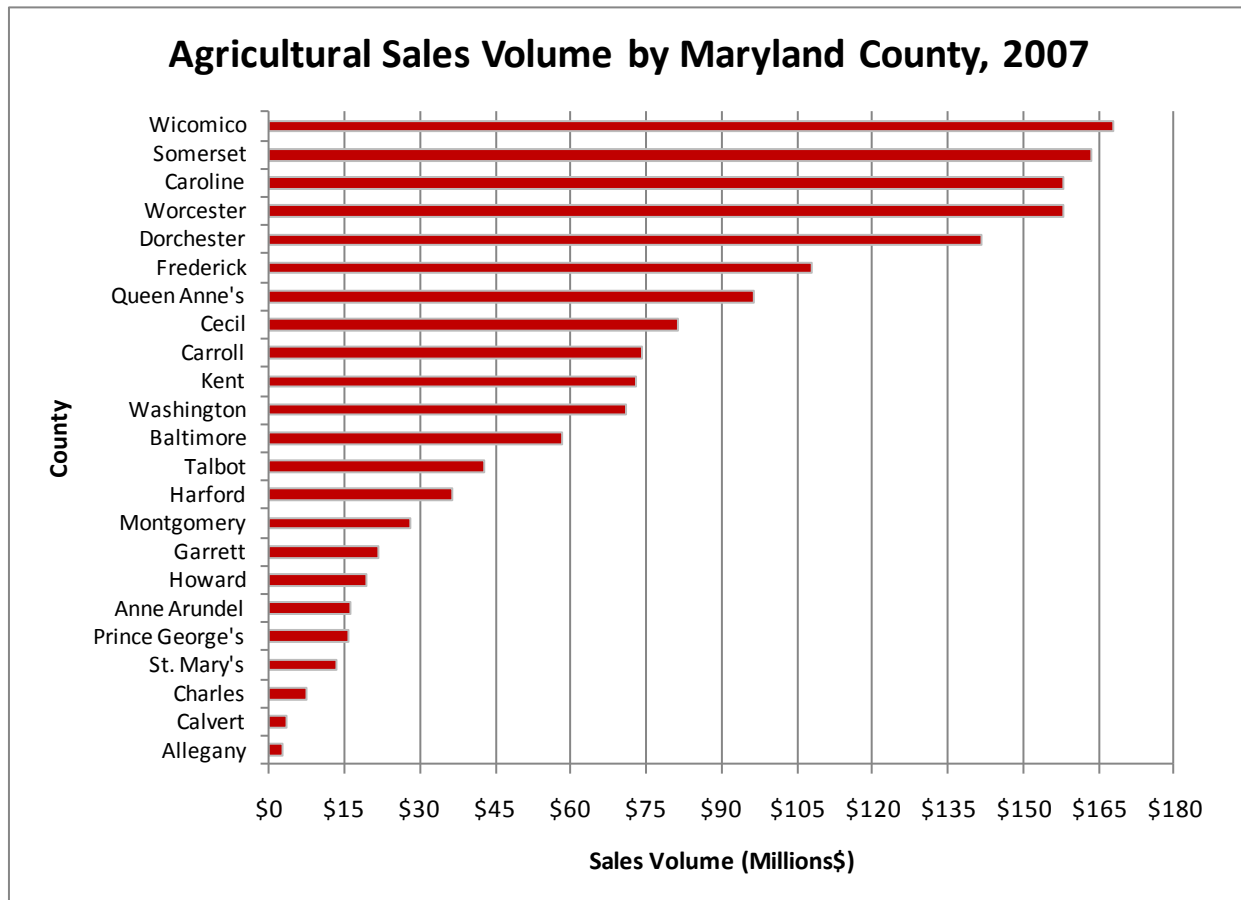
Maryland farms are more valuable on a per acre basis than the average U.S. farm. In 2007 Maryland farms generated nearly three times more sales per acre than the national average - \$760 per acre for Maryland compared to \$274 per acre nationally. Part of this difference is due to the fact that Maryland farms depend more on livestock sales than the average farm in the U.S. By far, the largest farm product category in Maryland by value is “poultry and eggs,” accounting for \$768 million in sales in inflation-adjusted dollars, nearly 50 percent of all the State’s agricultural sales in 2007 (See [Table 11](#)).



Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

¹ All dollar figures expressed in this report are in inflation-adjusted constant 2000 dollars.

Following poultry, the agricultural products with the highest sales volume were: nursery, greenhouse, floriculture, and sod products (\$177 million); milk and other dairy products from cows (\$163 million); corn (\$144 million); soybeans (\$71 million); cattle and calves (\$50 million); vegetables, melons, potatoes, and sweet potatoes (\$48 million); wheat (\$40 million); horses, ponies, mules, burros, and donkeys (\$27 million); and fruits, tree nuts, and berries (\$16 million) (See [Table 11](#)).



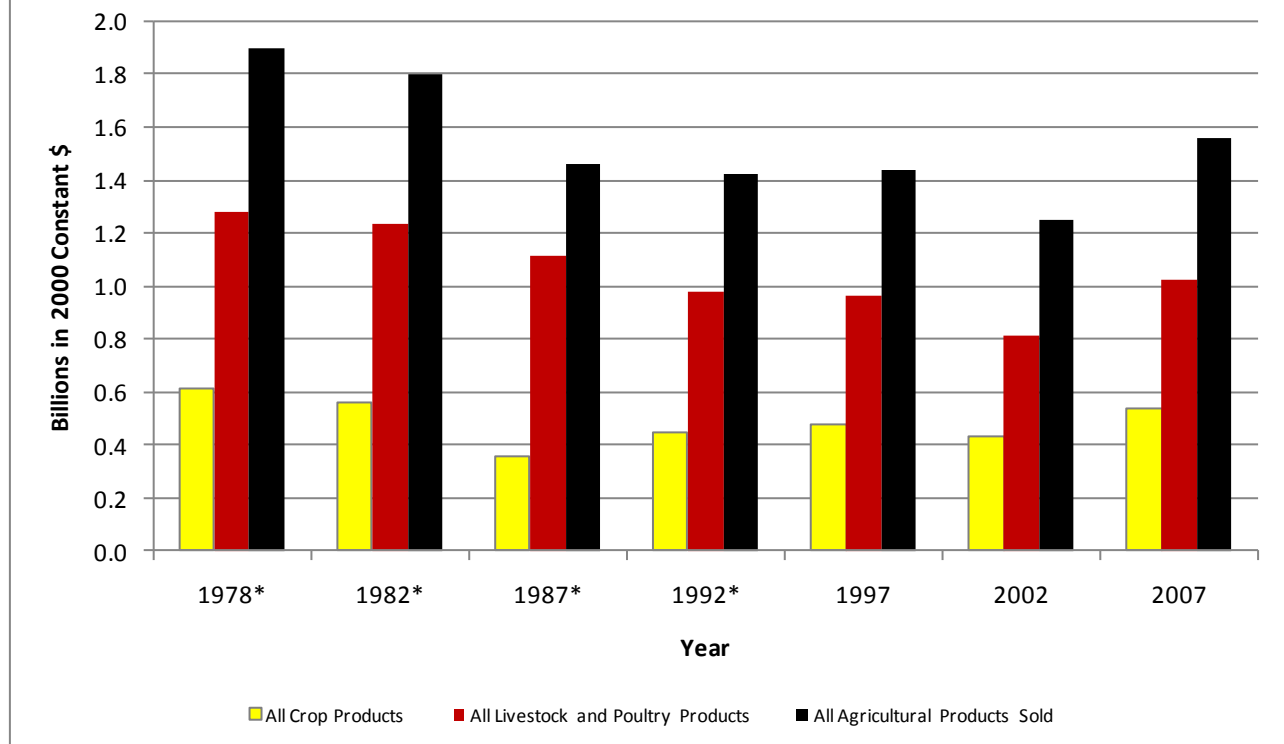
Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Wicomico County's \$168 million in agricultural product sales in 2007 was the highest in Maryland, representing 10.8% of all sales. Nearly eight out of 10 sales dollars (79%) in the County was in poultry products. Somerset, Caroline, and Worcester counties also shared similar sales patterns, each generating about 10 percent of the state's agricultural sales and each highly dependent on poultry products. Of the top selling counties, only Frederick was not dependent on poultry sales, instead gaining most of its sales from dairy products (41%) and cattle sales (12%).

Farm Sales

In 2007, Maryland generated a total of \$1.6 billion dollars in farm sales in inflation-adjusted 2000 dollars (\$1.8 billion in unadjusted 2007 dollars). Unlike the nation as a whole where livestock and crop sales were roughly equal, two-thirds of farm sales for farms in Maryland were sales of livestock and livestock products. This split has been roughly the same since 1978 (except for 1987, when livestock sales accounted for 75 percent of all sales).

Market Value of Agricultural Goods Sold by Type in 2000 Constant Dollars, 1978-2007



* Coverage adjustment is estimated by MDP for years 1978 to 1992 based on coverage adjustment for 1997
Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Overall sales of agricultural goods in 2007 declined by \$336 million in inflation-adjusted dollars since the 1978 Census. However, since the 2002 Census sales increased by \$310 million, and in 2007 were at their highest level since 1987. Livestock sales were the highest measured by the Agricultural Census since 1992, and crop products were the highest since 1982. Compared to the nation as a whole, Maryland's farmland produces a higher volume of sales per acre, selling 2.8 times more sales per acre in dollars in 2007 (\$273.87 in inflation-adjusted dollars for the U.S. vs. \$759.93 for Maryland).

Not surprisingly, there are differences between farms in the amount of sales that they generate. After adjusting for inflation,² the number of farms with sales of less than \$2,500 has increased by 3,450 farms (200.2%) since 1978, while the number of farms in all other categories has declined significantly. Comparing 2007 to 2002 shows that there have been increases in the number of farms in almost all categories except for farms with sales of \$100,000 to \$499,999, which declined by 12 percent (176 farms). Most significant is the increase in the number of farms with \$500,000 in sales or greater (191 farms or 30% since 2002), a category that increased for the first time since 1978.

² The Census of Agriculture reports a count of farms by category of sales volume. These counts were adjusted for inflation by assuming that farms were evenly distributed within each category. This method can distort the data if this is not the case (i.e., if a high proportion of farms cluster at the top or the bottom of each sales volume category).

Farms by Value of Sales in 2000 Constant Dollars in Maryland, 1978 to 2007

Farms by value of sales in Constant \$	1978*	1982*	1987*	1992*	1997	2002	2007
Less than \$2,500	1,723	2,958	3,752	3,449	3,741	5,157	5,173
\$2,500 to \$4,999	3,291	3,395	3,073	2,136	1,635	1,194	1,251
\$5,000 to \$9,999	2,382	2,245	2,044	1,804	1,639	1,076	1,302
\$10,000 to \$24,999	2,502	2,392	2,099	1,920	1,770	1,299	1,385
\$25,000 to \$49,999	2,173	1,849	1,367	1,172	950	726	877
\$50,000 to \$99,999	1,591	1,429	1,051	902	833	696	781
\$100,000 to \$499,999	1,823	2,087	1,931	2,025	1,877	1,417	1,241
\$500,000 or more	1,301	1,269	973	841	809	633	824
Total	16,786	17,625	16,290	14,249	13,254	12,198	12,834

* Coverage adjustment is estimated by MDP for years 1978 to 1992 based on coverage adjustment for 1997

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Major Farm Products in Maryland

While there are a great variety of agricultural products produced in Maryland, there are some products where the state holds a competitive advantage. The following products are ones where a comparison of state vs. national production shows that Maryland produces more than its relative size would suggest.³

Poultry and Poultry Products

Maryland's major strength in agricultural products is in poultry production. In 2007, Maryland's farms sold a total of \$768 million in poultry products, nearly 50 percent of all the State's agricultural sales in that year. These sales include all types of poultry products, but Maryland's greatest strength in this area is in the sale of "broilers," or chickens intended to be eaten for their meat. Of the 43 states that report poultry production, Maryland ranks 8th in sales of broilers and other meat-type chickens, producing 3.3 percent (296.4 million) of all the broilers sold in the U.S. in 2007.

Within Maryland, poultry production is concentrated on the Lower Eastern Shore. Of the 296 million broilers raised, 209 million (70.5%) were raised in Dorchester, Somerset, Wicomico, and Worcester counties. An additional 87 million (29.3%) were raised on the Upper Eastern Shore (Caroline, Cecil, Kent, Queen Anne's, and Talbot counties). This percentage may actually be higher, as data for Cecil County is suppressed to preserve confidentiality. (See [Table 12](#)).

While data on chickens kept for laying eggs ("layers") suffers from suppression issues, it appears that large farms that produce eggs (those with 10,000 layers or more) are scattered more generally

³ Significant products are ones where a ratio of Maryland's percentage of total national production as compared to Maryland's percentage of total farmland (it's "location quotient" or LQ) exceeds 1.0. In other words, Maryland contains 0.2 percent of all farmland in the U.S., so any amount of farmland used for a specific purpose or number of livestock in Maryland that exceeds 0.2 percent of the total value for the U.S. would represent a relative strength.

throughout the state, especially in Baltimore, Frederick, and Washington Counties, though there are some large egg-laying operations on the Eastern Shore as well.

Top Ten States in Sales of Broilers and Other Meat-Type Chickens, 2007

Rank	State	Number of Broilers and Other Meat-Type Chickens Sold	Percentage of All Sales
1	Georgia	1,398,912,031	15.7%
2	Arkansas	1,171,556,369	13.1%
3	Alabama	1,016,230,625	11.4%
4	Mississippi	823,427,574	9.2%
5	North Carolina	781,416,896	8.8%
6	Texas	616,299,999	6.9%
7	Kentucky	309,769,263	3.5%
8	Maryland	296,373,113	3.3%
9	California	280,512,754	3.1%
10	Missouri	279,937,641	3.1%
	United States	8,914,828,122	100%

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Dairy Products and Milk Cows

Maryland produced almost \$164 million in sales of dairy products in 2007, ranking it 27th of the 50 states. However, as the state contains 0.6 percent of the nation’s milk cows and only 0.2 percent of the nation’s farmland, it does have a relative strength in this area. In 2007, Maryland contained a total of 57,172 milk cows, down significantly from the 124,301 milk cows it contained in 1978 (a 54 percent decline). The number of milk cows declined nationally during this time period as well, from 10.2 million to 9.3 million, a smaller but still significant 9.3 percent decline.

Three counties in Maryland accounted for 62 percent of all dairy product sales in 2007: Frederick County in the Washington Suburban Region (\$51,537,000 in sales, 26.8% of the state total), Washington County in the Western Maryland Region (\$45,271,000 in sales, 23.5%), and Carroll County in the Baltimore Region (\$22,940,000 in sales, 11.9%). However, five of the seven regions had significant dairy product sales when all sales in each region were totaled (See [Table 12](#)).

Not surprisingly, in 2007 the same counties that had high dairy product sales also contained high numbers of milk cows. Frederick had the largest number, with 15,549 cows (27.2%), followed by Washington with 13,667 cows (23.9%), then by Carroll with 6,393 cows (11.2%).

Horses on Farms

Maryland has seen a consistent increase in the number of horses on farms⁴ in the State since 1997. The number of horses and farms with horses was consistently decreasing since 1987 and hit a low of 22,533

⁴ Note that the Census of Agriculture only counts the number of horses located on farms that meet the Census definition of a farm. The more comprehensive 2002 Maryland Equine Census counted all horses, no matter their location, and found that there were 20,200 places with equine activities in the state with a total of 87,100 equine

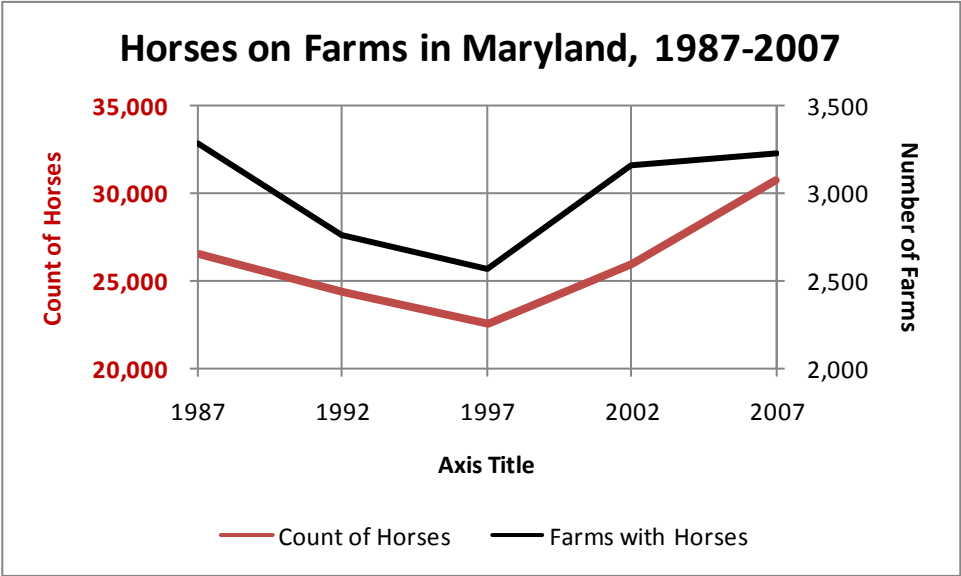
horses (a 15% decrease since 1987) on 2,572 farms (a 22% decrease) in 1997. Since that time, however, both the number of horses and the number of farms with horses have increased substantially.

In 2007, there were 30,747 horses on farms in Maryland, a 36.5 percent increase (8,214 horses) since 1997, and these horses were on a total of 3,225 farms, an increase of 25.4 percent (653 farms) over that 10 year period. Nationally, there were 4,028,827 horses on farms in 2007, an increase of 384,549 (10.6%) over the 3,644,278 in 2002. Since 1987, the number of horses on farms in Maryland has increased 16 percent (4,234 horses), though there has been a slight decline in the number of farms (62 less than in 1987, or -1.9%).

While this 20-year high in the number of horses on farms is not directly related to the total number of equine animals in all places in Maryland, it is an encouraging sign for the future of Maryland's equine industry.

In 2007, Frederick County had the most horses on farms (3,653 or 11.5%) and farms with horses

(372 or 11.9%). Montgomery County has the second-largest number of horses on farms (3,029, or 9.9%) but Carroll County has the second largest number of farms with horses (324, or 10.0%). Somerset County has both the fewest horses (106, 0.3%) and the fewest farms with horses (21, 0.7%). Overall, Maryland farms sold \$27 million worth of horses and other equine animals in 2007.



Nursery, Greenhouse, Floriculture, and Sod Products

“Nursery, greenhouse, floriculture, and sod” products are the second-largest agricultural product category by sales in Maryland after “poultry and egg” products. In 2007, Maryland produced over \$177 million worth of these products. Only 406 farms produced nursery and greenhouse products in 2007, and only 425 acres of farmland were used to grow nursery crops. These farms also operated a total of almost 13 million square feet of covered greenhouse space (“under glass or other protection”). While the number of farms involved in nursery and greenhouse production is small, the retail nature of their business produces a high volume of sales.

Baltimore County was the largest producer of nursery, greenhouse, floriculture, and sod products in 2007, selling \$28.9 million in products (16.3% of the total). Cecil and Wicomico Counties were second and third in sales, selling \$20.33 million (11.5%) and \$20.26 million (11.4%), respectively.

animals. These places totaled 685,000 acres, with 206,000 acres used primarily for equine related purposes. See <http://www.marylandhorseindustry.org/census2.htm> for more information.

Haylage, Grass Silage and Greenchop

Haylage, grass silage and greenchop are crops grown for animal feed. They consist of multiple crop types, such as alfalfa, corn, sorghum, and other types of hay or grass. Maryland grows a large proportion of crops for animal feed, including corn, sorghum, and forage-land used for growing various types of hay and haylage, grass silage, and greenchop for grazing.

Compared to the nation as a whole, Maryland proportionally had 7 times more land in use to grow corn for silage (as a ratio of the percentage of farmland used to grow corn for silage in both areas, commonly known as a *location quotient* or LQ). However, the amount of land used to grow corn for silage decreased substantially from 1997 to 2007 (-27,589 acres or 30.2%), a decline that is likely linked to the reduction of the milk cow herd over that time period.

Acres Used for Selected Crops for Haylage, Silage, and Greenchop in Maryland, 1997-2007

Selected Crops Harvested	Acres/LQ	2007	2002	1997
Corn for Silage or Greenchop	Acres	63,979	72,988	91,568
	LQ	4.8	4.9	7.0
Sorghum for Silage or Greenchop	Acres	1,008	1,206	1,024
	LQ	1.0	1.3	1.2
Forage-land for Hay and Haylage, Grass Silage, and Greenchop	Acres	223,390	227,727	(NA)
	LQ	1.6	1.6	(NA)

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Maryland's ratio of land in sorghum production was approximately equal to the U.S. in 2007, while it had 1.6 times the proportion of land used for forage grazing. Land used for both of these crop types has seen a small reduction in acreage since 1997. Most acreage growing silage and greenchop is located in Frederick County, with significant amounts also located in Carroll and Washington Counties (See [Table 13](#)).

Crops for Grain

Crops grown for grain for the five main types of grain (barley, corn, oats, sorghum, and wheat) covered 668,371 acres of Maryland's 1,246,603 acres of harvested cropland in 2007 (53.6%). Of these, the largest single type was corn grown for grain, covering 460,137 acres (36.9% of all harvested acres).

Acres Used for Selected Crops for Grain in Maryland, 1997-2007

Selected Crops Harvested	Acres/LQ	2007	2002	1997
Corn for Grain	Acres	460,137	406,841	403,242
	LQ	2.4	2.7	2.5
Wheat for Grain, All Types	Acres	166,713	162,062	198,274
	LQ	1.5	1.6	1.4
Barley for Grain	Acres	34,288	36,241	46,770
	LQ	4.4	4.1	3.4

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Of crops grown for grain, only corn, wheat, and barley cropland were in production on a proportionally higher number of acres in Maryland than in the nation. Maryland contains 1 percent of all farmland in production for barley, a proportion that has grown since 1997 even with a 26.7 percent decrease in acreage (due to a similar decrease in barley acreage planted nationwide). Corn production increased by 53,296 acres since 2002 (13.1%), likely due to the increased demand in 2007 and prior years for corn for ethanol and other uses.

The county with the largest number of acres in production for corn for grain (50,012 acres, 45.4% of harvested cropland) and wheat for grain (25,964 acres, 23.6%) in 2007 was Queen Anne’s County, while Caroline County had the largest acreage producing barley (7,234 acres, 7.2% of harvested cropland).

Soybeans, Other Beans, and Seeds

Soybeans cover a large proportion of the harvested cropland in Maryland. In 2007, 386,604 acres or 31 percent of all harvested cropland was used for soybean production. This is a significant decrease from 1997, when 507,924 acres were used for soybean production. This 121,320 acre (23.9%) loss reduced the relative importance of soybeans to Maryland’s agricultural output, but soybean production in 2007 was still a proportional strength in Maryland.

Acres Used for Soybeans, Other Beans, and Sunflower Seeds in Maryland, 1997-2007

Selected Crops Harvested	Acres/LQ	2007	2002	1997
Soybeans for Beans	Acres	386,604	465,780	507,924
	LQ	2.7	2.9	3.3
Dry Edible Beans, Excluding Limas	Acres	0	160	988
	LQ	0	0.04	0.3
Sunflower Seed, All	Acres	596	104	24
	LQ	0.13	0.03	0

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Acres used to produce other dry edible beans fell to nothing in 2007, a decrease of 988 acres since 1997. This lost crop type has been somewhat replaced, however, by an increase in acreage used for sunflower seed production. While this production was not proportionally relevant to Maryland’s agricultural output in 2007, there was a 25 times increase in the number of acres planted for sunflower seeds from 1997 to 2007.

Queen Anne’s County had the largest number of acres in soybean production in 2007, with 46,470 acres (42.2% of the County’s total harvested cropland, 12.0% of the state total), followed closely by Caroline County with 44,288 acres (44.2% of County cropland, 11.5% of State) (See [Table 13](#)).

Fruits and Vegetables

In 2007, the amount of land used in Maryland to grow vegetables harvested for sale showed that the state has a relative strength in this area. There were 33,447 acres of land producing vegetables (including potatoes and sweet potatoes) in 2007, a decrease of 4,811 acres (12.6%) since 1997. Maryland does not have the same strength in fruit production, though the state did have 4,542 acres of land in

orchards in 2007. Maryland generated \$48 million in sales of vegetables and \$16.5 million in sales in fruits, tree nuts, and berries in 2007.

Acres Used for Vegetables and Orchards in Maryland, 1997-2007

Selected Crops Harvested	Acres/LQ	2007	2002	1997
Vegetables Harvested for Sale	Acres	33,447	34,903	38,258
	LQ	3.2	3.1	3.2
Land in Orchards	Acres	4,542	4,931	5,291
	LQ	0.4	0.4	0.4

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Most land used for vegetable production in Maryland (46.7%) is located in Dorchester and Caroline counties, which together generated 36 percent (\$17 million) of all vegetable sales, while Washington County contains the most land in orchards (38.3%) and generated 34 percent (\$5.6 million) of all fruit sales.

Tobacco

Tobacco merits mention due to the steep decline of growing acreage in Maryland in the last 10 years. In 1997, Maryland grew 11.7 million pounds of tobacco on 727 farms, using 7,814 acres of land. Tobacco production in the state ranked 16th out of 19 states, and Maryland grew 0.7 percent of the nation's tobacco crop. However, in 1998 Maryland instituted the Tobacco Crop Conversion Program to replace tobacco on agricultural land with other crops. This program pays farmers based on previous tobacco production (\$1 per pound) for ten years. The data shows the success of this program. By 2007, Maryland only produced only 842,793 pounds of tobacco (a decrease of 10.9 million pound or 93%) on 70 farms using 423 acres. In 2007, Maryland produced less tobacco than any other state except for West Virginia. This trend was seen on the national level as well, as the U.S. fell from 1,744 million pounds of tobacco produced in 1997 to 778 million pounds produced in 2007, a 55 percent decrease in production.

Acres Used, Farms Growing, and Pounds of Tobacco Produced in Maryland, 1997-2007

Selected Crops Harvested	Acres/LQ	2007	2002	1997
Tobacco (acres)	Acres	423	1,162	7,814
	LQ	0.5	1.2	4.1
Tobacco (farms)	Farms	70	159	727
	LQ	0.7	0.5	1.4
Tobacco (pounds)	Pounds	842,793	1,739,926	11,798,301
	LQ	0.5	0.9	3.0

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

In 2007, St. Mary's County produced the majority of Maryland's tobacco (559,694 pounds, or 66.4%) on the majority of tobacco-producing land (292 acres, or 69.0% of the state total). The only other counties that are reported to have grown any tobacco in 2007 were Cecil, Charles, and Calvert.

Major Agricultural Product by Jurisdiction

Most jurisdictions in Maryland had agricultural product sales in 2007 that were concentrated in one specific product category. Not surprisingly, many jurisdictions have high sales in poultry and egg products, the single largest product category by sales volume in Maryland.

Largest Single Agricultural Product by Sales Volume by Jurisdiction in Maryland, 2007 *

Jurisdiction	Agricultural Product	Sales (\$1,000)	Percentage of Juris. Total
Maryland	Poultry and Eggs	\$767,689	49.2%
Allegany	Cattle and Calves	\$882	32.9%
Anne Arundel	Nursery, Greenhouse, Floriculture, and Sod	\$9,317	57.4%
Baltimore	Nursery, Greenhouse, Floriculture, and Sod	\$28,932	49.8%
Calvert **	Corn	\$634	18.4%
Caroline	Poultry and Eggs	\$107,719	68.1%
Carroll	Milk and Other Dairy Products from Cows	\$19,491	26.2%
Cecil ***	Livestock, Poultry, and Their Products	\$51,660	63.5%
Charles	Nursery, Greenhouse, Floriculture, and Sod	\$1,320	17.5%
Dorchester	Poultry and Eggs	\$103,725	73.2%
Frederick	Milk and Other Dairy Products from Cows	\$43,789	40.6%
Garrett	Milk and Other Dairy Products from Cows	\$10,882	49.8%
Harford	Corn	\$8,993	24.7%
Howard	Nursery, Greenhouse, Floriculture, and Sod	\$11,420	59.3%
Kent	Poultry and Eggs	\$17,075	23.4%
Montgomery	Nursery, Greenhouse, Floriculture, and Sod	\$10,805	38.3%
Prince George's	Nursery, Greenhouse, Floriculture, and Sod	\$11,108	70.2%
Queen Anne's	Poultry and Eggs	\$47,582	49.4%
St. Mary's	Nursery, Greenhouse, Floriculture, and Sod	\$2,687	19.8%
Somerset	Poultry and Eggs	\$149,938	91.6%
Talbot	Poultry and Eggs	\$19,104	44.5%
Washington	Milk and Other Dairy Products from Cows	\$38,465	54.1%
Wicomico	Poultry and Eggs	\$132,432	78.8%
Worcester	Poultry and Eggs	\$135,211	85.7%

* Non-specific categories of "other" products were excluded from this table

** Some sales categories in Calvert County were suppressed

*** Specific data on poultry and egg production was suppressed for Cecil County, though the majority of products sold in the "Livestock, Poultry, and Their Products" category were probably poultry products

Source: Census of Agriculture, National Agricultural Statistics Service, USDA, 2007

Some jurisdictions that concentrate in poultry products are highly dependent upon them. For example, almost 92 percent of all agricultural products sold in Somerset County were from the poultry and eggs category. Other jurisdictions have more balanced sales portfolios, such as Carroll County, whose largest single product category, milk and other dairy products from cows, accounts for only 26 percent of all sales. With few exceptions, the highest grossing product in each jurisdiction was one of the three top

categories in Maryland: Poultry and eggs; Milk and other dairy products from cows; or Nursery, greenhouse, floriculture, and sod.

About the Census of Agriculture

The Census of Agriculture is conducted every five years by the National Agricultural Statistics Service (NASS), a branch of the United States Department of Agriculture (USDA). NASS has conducted the Census since 1997. Previously, the Census was conducted by the U.S. Bureau of the Census. In one form or another, there has been an agricultural census conducted periodically in the U.S. since 1840.

According to NASS, the Census of Agriculture “is a complete count of U.S. farms and ranches and the people who operate them. The Census looks at land use and ownership, operator characteristics, production practices, income and expenditures and many other areas.”⁵ Data is published for the nation, states, certain territories, and all U.S. counties.

Farm Definitions

The USDA 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 relevant census year.⁶ This definition has changed nine times since 1840. From 1959 to 1974, the definition included farm size, with different sales volumes based on size. The current definition was adopted after 1974 and has no farm size requirement. Inflation has changed the definition over time, as the table below shows.

Year	Current Dollars			Constant Dollars (\$2000) *		
	10 Acres+	Less than 10 Acres	All Acres	10 Acres+	Less than 10 Acres	All Acres
2007			\$1,000			\$850
2002			\$1,000			\$966
1997			\$1,000			\$1,051
1992			\$1,000			\$1,165
1987			\$1,000			\$1,410
1982			\$1,000			\$1,671
1978			\$1,000			\$2,312
1974	\$50	\$250		\$151	\$753	
1969	\$50	\$250		\$198	\$990	
1964	\$50	\$250		\$230	\$1,148	
1959	\$50	\$250		\$245	\$1,224	

* Dollar values adjusted using the Personal Consumption Expenditure (PCE) index from the Bureau of Economic Analysis' National Income and Products Accounts System (NIPA)

Source: 2002 Census of Agriculture: History, Appendix B

⁵ http://www.agcensus.usda.gov/Help/FAQs/General_FAQs/index1.asp

⁶ http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf

About Coverage Adjustment in the 1997 and later Censuses

In 1997 NASS changed how data was collected for the Census of Agriculture to ensure that farms were properly counted, a process known as *coverage adjustment*. These changes relate to how farm operations that did not show up on the USDA's official list of farms and ranches were treated. NASS used this list as the initial Census Mailing List (CML) and sent census forms to all addresses on the list. To ensure that the list was complete, NASS used a sampling scheme where selected aerial photography from the June Agricultural Survey (JAS) was used to sample segments of land to search for farmland. These sample segments were then "personally enumerated" to find every operating farm in each land segment. This process was supplemented with the Agricultural Coverage Evaluation Survey (ACES), another sampling scheme that was designed to "provide measures of small and minority owned farms."⁷

The farms found in these processes were compared to the farms on the CML, and farms that were missing from the CML were placed on a separate list, called the "Not on the Mail List" or NML. Farms on the NML were sent a different form than the CML so that those forms could be identified when they were returned. Since the CML farms were intended to be the entire population of farms while the NML farms were a sample of all missing farms, the total undercoverage of farms was estimated on the state level, and weighted estimates were generated for the county level. These estimates also include estimates that adjust the data for errors caused by non-responsive farms.

To estimate the difference that coverage adjustments make to the data, all data prior to 1997 in this report has been adjusted in the same proportion that data from 1997 was adjusted. Unlike later years, data for 1997 was reported in both its unadjusted and adjusted forms, which allows an adjustment factor to be calculated for each type of data.

⁷ http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf , p A-2.