What Our Region Grows:

A look at Agricultural Production and Demand in the Washington Area Foodshed[1]

[1]Based on the U.S. Food Market Estimator

December 2012

NATIONAL CAPITAL FARMS.ORG
VA · DC · MD · WV

Prepared by The Metropolitan Washington Council of Governments (COG) and the Regional Agricultural Workgroup (RAW)

This report is intended to give an informative overview of agriculture in the Washington region. It examines regional agricultural production and estimated local demand, as well as opportunities and limitations facing the 21st century farmer.

Note: USDA and Leopold Center estimates for county production and demand may vary from most recent county data.

Workgroup Members*:

- Frederick County, MD Business Development and Retention Division
- Montgomery County, MD Department of Economic Development
- Montgomery County Soil Conservation District
- Prince George's County, MD (UMD Extension)
- Prince George's County, M-NCPPC
- Fauquier County, VA Department of Agricultural Development
- Loudoun County, VA Department of Economic Development
- Loudoun Soil and Water Conservation District
- Jefferson County, WV Development Authority
- Freshfarm Markets
- Piedmont Environmental Council
- Potomac Vegetable Farms

*Includes participation and support from the Metropolitan Washington Council of Governments (COG)

"The mission of the Regional Agricultural Workgroup is to protect and promote agriculture in the Washington region by investigating potential approaches for sustaining an economically viable regional agricultural system through better support of farms, farmers, farm activities and programs and marketing of local agricultural products."

To learn more about the Regional Agricultural Workgroup please visit:
www.nationalcapitalfarms.org

Table of Contents

Page

List of Tables

Page

Appendix 1: Tables

List of Figures

Page

Appendix 1: Figures

Glossary of Terms

Agribusiness- Farming engaged in as a large-scale business operation embracing the production, processing and distribution of agricultural products, and the manufacture of farm machinery, equipment and supplies.

Broiler- a young eating chicken that is typically around 60 days old and whose meat is tender and juicy, with a small amount of fat.

COG (a.k.a. Metropolitan Washington Council of Governments)- The regional planning organization for the Washington, DC area which is comprised of elected officials from 22 local governments, members of the Maryland and Virginia state legislatures, and members of the U.S. Congress.

COG Board- The COG Board of Directors is comprised of members from the following jurisdictions and municipalities- **Maryland**: Bladensburg, Bowie, Charles County, College Park, Frederick, Frederick County, Gaithersburg, Greenbelt, Montgomery County, Prince George's County, Rockville and Takoma Park; **Virginia**: Alexandria, Arlington County, Fairfax, Fairfax County, Falls Church, Loudoun County, Manassas, Manassas Park and Prince William County; **District of Columbia**.

COG Region- The approximately 3,600 square mile area served by the Metropolitan Washington Council of Governments.

Community Supported Agriculture (CSA)- A network of individuals who, as paying subscribers, have pledged to support a local farm. Members typically pay at the beginning of the growing season and receive weekly shares of vegetables and fruits, as well as possibly herbs, cut flowers, eggs, dairy products and meat. Some CSA's waive membership fees for contributed labor.

Cornmeal- A meal (coarse flour) ground from dried maize or corn. Very finely ground cornmeal is commonly referred to as corn flour.

Delmarva Peninsula- The peninsula between the Chesapeake and Delaware bays including most of Delaware and the part of Maryland and Virginia east of the Chesapeake Bay.

Eastern Shore- The region of Maryland and Virginia east of the Chesapeake Bay.

Equine- A horse or other member belonging to the horse family.

Farm Cooperative- A cooperative that unites farmers for production or other activities needed by its members (e.g., processing, marketing of products, or supply of products).

Farmers Market- A market that operates multiple times per year and is organized for the purposes of facilitating personal connections that create mutual benefits for local farmers, shoppers and communities. It is characterized by farms selling directly to the public products that the farms have produced.

Farmland Fragmentation- The process typically associated with urbanization wherein farmlands become non-contiguous and intermixed with non-farm uses, resulting in an overall loss in agricultural production and efficiency.

Food Aggregator/Food Hub- A business or organization that actively manages the aggregation, distribution and marketing of source-identified food products, primarily from local and regional producers, for the purpose of strengthening production capacity and access to wholesale, retail and institutional markets.

Grain Farming- The cultivation, at an agricultural scale, of cereals (such as wheat, rye, oats, barley, corn and sorghum) for either human or livestock consumption.

Hay- Dried grasses and other foliage used as animal feed. Typical hay crops include timothy, alfalfa, and red clover.

Local Agriculture- Food and other agricultural products, for example wool or flowers, that are grown or produced on a farm located within a radius of approximately 100 miles from home.

Locavore- A person who eats foods grown, raised or produced locally whenever possible; usually within 100 miles from home.

Meat Processor- A facility where animals are butchered, thereby turning meat into different cuts for human consumption. Note: A meat processing facility does not slaughter live animals.

'Niche' Agriculture- Also referred to as specialty market agriculture, involves a unique or differentiated product, has a limited number of buyers and sellers, generally faces entry barriers into larger production/commodity markets, and represents a relatively small portion of total agricultural production. Examples include, but are not limited to: pasture-raised meats (beef, lamb, chicken - meat and eggs), fruits and vegetables, dairy products (buffalo mozzarella, organic milk and cheeses), grains (spelt, various wheat grains), herbs and flowers.

Organic Farm- A farm where vegetable, fruit and/or animals are produced using natural sources of nutrients (such as compost, crop residues and manures), and natural methods of crop and weed control are employed, instead of synthetic/inorganic agrochemicals.

Regional Agricultural Workgroup (RAW)- The agricultural working group for the 3,600 square mile COG region.

Straw- Stalks of threshed grain, used as bedding and food for animals, for thatching, and for weaving into baskets.

TMDL (a.k.a. Total Maximum Daily Load)- Established under the 1972 Clean Water Act, the requirement that the maximum amount of a pollutant (such as nutrients, metals, herbicides, etc) that a waterbody can receive and still safely meet water quality standards, be calculated, and that impaired waters be listed.

Transfer Development Rights (TDR's)- A zoning statute that permits the owner of a property zoned for low density development, agriculture or conservation use to sell and transfer his or her development rights to another property owner located in a designated higher density receiving area.

USDA (a.k.a. United States Department of Agriculture)- The federal department created in 1862 that administers programs that provide services for farmers including research, soil conservation and efforts that help support the nation's farming economy.

U.S. Food Market Estimator- A tool developed by the Leopold Center for Sustainable Agriculture in cooperation with Iowa State University for calculating the production needed to meet demand for 204 food items based on general, national per capita food consumption data. The Estimator (also referred to by many as the Iowa State Calculator) uses per capita consumption data from USDA and multiplies it by the Census's 2007 population estimates. The tool uses uniform consumption data across all geographies. However, it cannot compare consumption with production.

Vineyard- A farm that grows grape-bearing vines, which are grown mainly for wine making, but also raisins, table grapes and non-alcoholic grape juice.

Washington Agricultural Region (a.k.a. Washington Region)- The approximately 8,600 square mile area in and around the District of Columbia, consisting of over 12,000 farms and comprised by the following counties/jurisdictions- **Maryland**: Anne Arundel, Calvert, Carroll, Charles, Frederick, Howard, Montgomery, Prince George's, Saint Mary's and Washington; **Virginia**: Arlington, Clarke, Culpeper, Fairfax, Fauquier, King George, Loudoun, Prince William, Rappahannock and Stafford; **West Virginia**: Jefferson; **District of Columbia**.

Washington Metropolitan Area- The Washington metropolitan statistical area, defined by the U.S. Census, which includes the following jurisdictions and municipalities- **Maryland**: Bladensburg, Bowie, Calvert County, Charles County, College Park, Frederick, Frederick County, Gaithersburg, Greenbelt, Montgomery County, Prince George's County, Rockville and Takoma Park; **Virginia**: Alexandria, Arlington County, Clarke County, Fairfax, Fairfax County, Falls Church, Fauquier County,Fredericksburg, Loudoun County, Manassas, Manassas Park, Prince William County, Stafford County, Spotsylvania County and Warren County; **District of Columbia**.

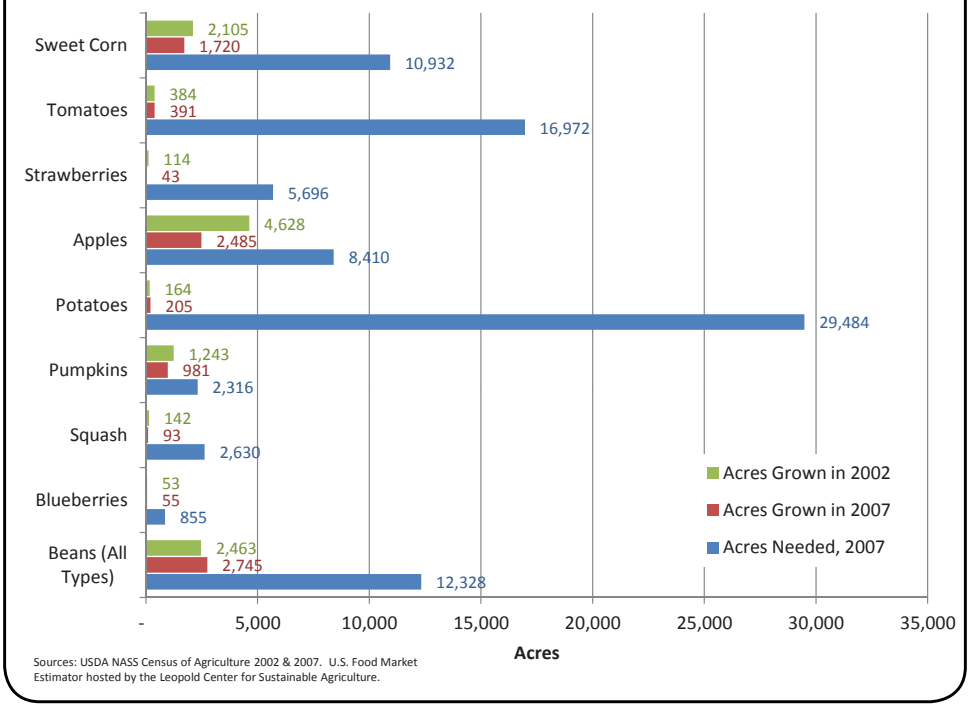
Western Shore- The part of Maryland located west of the Chesapeake Bay.

Winery- An establishment at which wine is made.

Executive Summary

With a population of 6.52 million people and growing, the Washington agricultural region (a.k.a. Washington region) is geographically, socioeconomically, and culturally diverse. To many of its urban dwellers, it may come as a surprise that the region has a rich agricultural community that provides a variety of products to our region and beyond. In fact, agriculture constitutes approximately 28 percent of the region's land area and contributes approximately $1 billion annually to its economy. However, with few exceptions, regional agriculture is not meeting local food demands, a situation that is only worsened with an increasing population and decreasing farm acreage. The region does have successful medium-scale production for a variety of products grown for human consumption (apples, pumpkins, beans, sweet corn), but none of these are produced at levels to entirely meet demand (Figure 1). Similarly, dairy almost meets local market demand. There is also a small beef cattle industry, as well as minor pork and chicken production.

Figure 1: Crop Production Versus Demand in the Washington Region, 2002 & 2007



Sources: USDA NASS Census of Agriculture 2002 & 2007. U.S. Food Market Estimator hosted by the Leopold Center for Sustainable Agriculture.

The driving agricultural sector for the region is the production of grain feedstock. In 2007, the acreage for corn and soybeans accounted for 17.9 percent of all agricultural land in the Washington region. This is largely due to the nearby Eastern Shore poultry industry, which produced over 550 million birds in 2007. Due to unavailable farm acreage, the Eastern Shore cannot produce enough grain to feed its chickens, and the geographically close Washington region is able to sell large amounts of corn and soybeans to supplement their deficit. Since 1995, the Eastern Shore poultry industry has, due to competition from other parts of the country where production costs are lower, declined. Further decline could have serious implications for agriculture in the Washington region, and state and local officials should consider them in future policy decisions.

Agriculture in the region faces many challenges, and these challenges are taking a toll on current farming enterprises. The most significant of these is population growth and associated urban development. From 2002 to 2007, approximately 118,599 acres (seven percent) of farmland in the region were lost to residential and commercial development. Additional impediments include, but are not limited to, an aging farmer population, not enough new farmers, farmland fragmentation, increasing labor costs, a loss of support services, stringent environmental and health regulations, restrictive zoning laws, and limited water availability.

Despite the challenges that farmers face, many are capitalizing on new market opportunities. The Washington region's relative affluence has resulted in a growing demand for high-end, locally sourced fruit, vegetable, meat, and dairy products, and more and more farmers are responding. While it is not realistic to expect the region to become agriculturally self-sufficient, market deficiencies do provide new opportunities for expanding small-scale, local food production and marketing efforts.

It is recognized that agricultural problems and opportunities in the Washington region are generally best addressed through cooperative regional approaches and initiatives. As such, two new COG region initiatives (Region Forward and Economy Forward) represent potential starting points for greater regional agricultural dialogue and cooperation, as well as further support for local agriculture and related economic planning integration. The Region Forward goal is to maintain 450,000 acres of agricultural lands in the COG region.

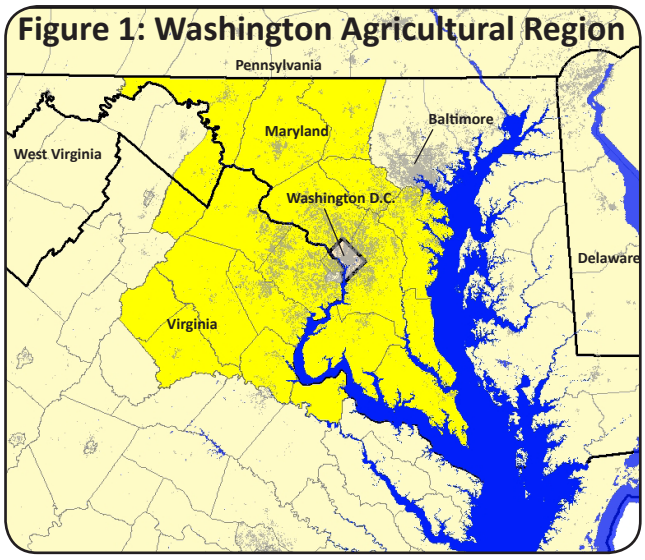
Regional Agricultural Workgroup (RAW) recommendations for the support of 21st century agriculture in the Washington region are as follows:

- Political leaders and decision makers in the Washington region need to come together to formulate a strategic agriculture support plan and agree upon those steps and measures that will help sustain local agriculture through the 21st century. This could be accomplished through leadership provided by the COG Board working in partnership with local member and non-member jurisdictions and municipalities;
- Comprehensively examine and, where appropriate, remove and/or modify regulatory-related obstacles to local farmers. For example, fast-track variance and special exception case reviews for typical agricultural-related building requests, and explore the possibility for reducing associated filing/permit fees;
- Inventory public lands that could potentially be used in the near future for the establishment of either a first class, permanent farm incubator training facility or a local processing facility. Note: implementation options include but are not limited to: floating county bonds, creating new public-private partnerships, actively soliciting donations, etc;
- Provide new and additional tax incentives that promote local farming and related support services. This could include new tax deductions for county sponsored farming assistance programs and initiatives;
- Adequately fund agricultural-related technical, educational and marketing services at the county level;
- Support the development of local food aggregation/distribution infrastructure that encourages local food consumption by institutions (such as schools and hospitals), restaurants, and the general public;
- Bring agriculture back to the school curriculum. Consider providing extra high school student service credit hours for cooperating county farmer-certified, agricultural-related work and study;
- Expand lobbying efforts that showcase the importance of and need for sustaining local agriculture. This could be done through the assistance and involvement of county councils, state delegates and senators, the COG Board, and both citizen and farm-friendly groups;
- Expand both farmer mentoring and land leasing opportunities; and
- Work with local and state lending institutions to make farming-related loans easier and quicker to obtain.

The Washington Agricultural Region

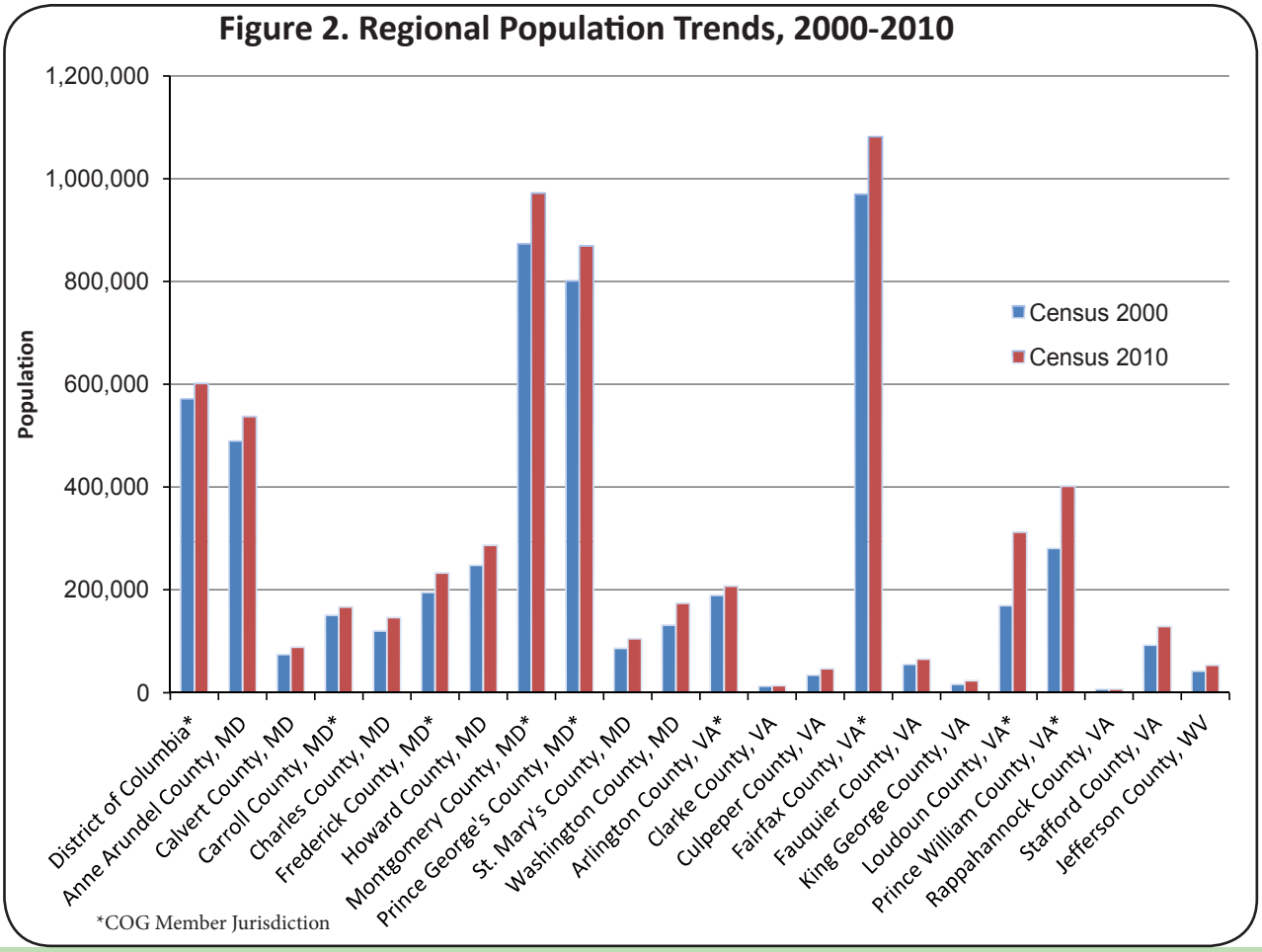
Home to 6.52 million people and growing, the 8,629 square mile Washington agricultural region (henceforth referred to as the Washington region) continues to maintain a delicate balance between urbanized, urbanizing, and more rural farming jurisdictions (Figures 1 and 2). Benefitting from a favorable climate and varied topography and soils, the Washington region offers a rich bounty of agricultural products. These include award-winning wines, high quality meats, fruits and vegetables, cut flowers and other specialty products and services. While approximately 28 percent (1,546,381 acres) of the Washington region's land area is in agricultural use, farm acreage, unfortunately, continues to decline (see Figure 3, page 2).

Figure 1: Washington Agricultural Region



In addition to preserving critically needed open space, protecting local air and water quality, and maintaining rural lifestyles and livelihoods, agriculture contributes approximately $ 1 billion per year to the region's economy. Commodity crop-related farming, such as corn and soybean production, is the primary form of agriculture. These crops are used mainly for livestock feed. However, in recent years there has also been a small increase in acreage dedicated to the growing of fruits and vegetables. These products are generally sold locally through farmers markets, direct on-farm sales and community supported agriculture (CSA). New farms are also slowly developing to meet an expanding market for other locally sourced agricultural products such as specialty meats and dairy products. While many

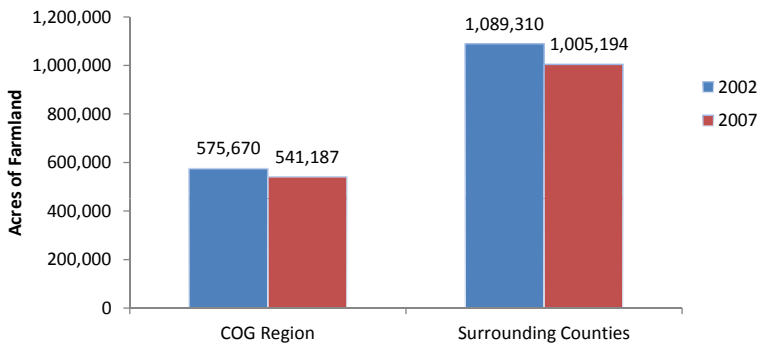
Figure 2. Regional Population Trends, 2000-2010



farmers are under pressure from outwardly sprawling development and higher land values and taxes, regional agriculture remains surprisingly strong.

This report provides a 'snapshot' of the state of the region's agriculture, as well as the general food production and demand, and economic contributions. Product demand data, which is largely based on estimates from the U.S. Food Market Estimator, is included for the counties shown in both Table 1 and Figure 4, page 3. Together, these 22 jurisdictions represent both the 3,600 square mile COG region and the surrounding counties that comprise the core Washington area "foodshed", as defined by the Regional Agricultural Workgroup (RAW).

Figure 3. Acres of Farmland, 2002 & 2007



It is important to note that the tables and figures presented herein summarize estimated market demand versus agricultural production for select products in the region. Crop production data and acreages were obtained from both USDA's 2002 and 2007 Census of Agriculture. Production needed data was derived from the U.S. Food Market Estimator hosted by the Leopold Center for Sustainable Agriculture. The USDA conducts its nation-wide Census of Agriculture once every five years, and there is generally a one year lag

Potomac River at White's Ferry: Poolesville, MD

Table 1. State/Jurisdictional Members of the Core Washington Agricultural Region

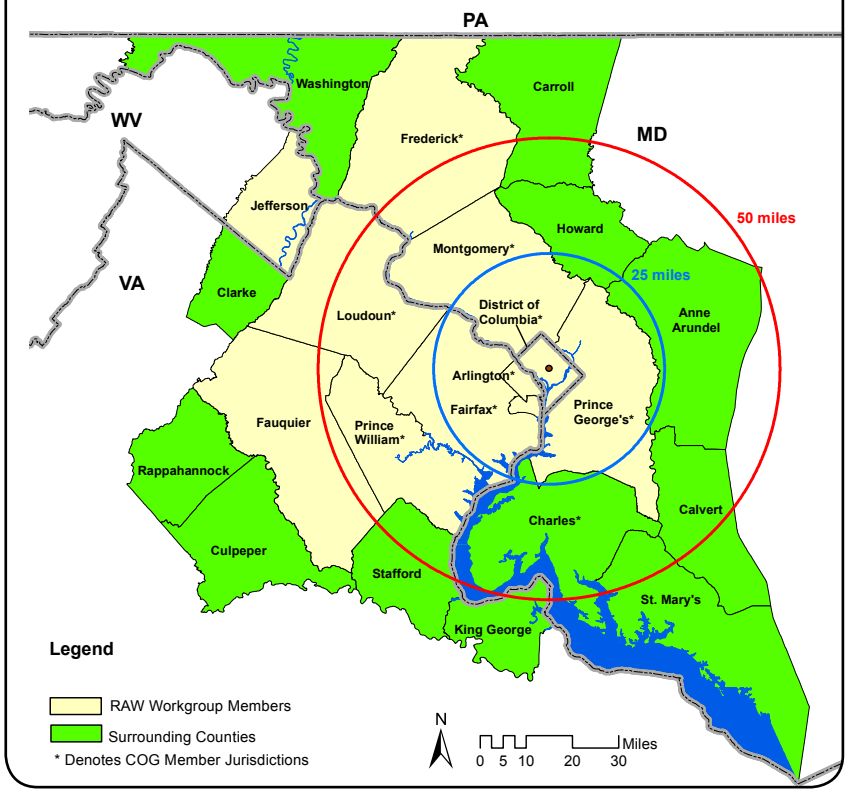
State/Jurisdiction	County
Maryland:	Anne Arundel, Calvert, Carroll, Charles*, Frederick*, Howard, Montgomery*, Prince George's*, St Mary's, and Washington
Virginia:	Arlington*, Clarke, Culpeper, Fairfax*, Fauquier, King George, Loudoun, Prince William*, Rappahannock, and Stafford.
West Virginia:	Jefferson
***District of Columbia:**	N/A

*COG Member Jurisdiction

time in associated public data availability. It is also important to note that there is no USDA census data for the entirely urban District of Columbia. Market demand in the Estimator is based upon the USDA food availability data system, which is an annual estimate of the production needed to meet local demand for 204 food items (USDA, 2004). In addition, given that the availability of new Census of Agriculture data is less than two years away, the Regional Agricultural Workgroup (RAW) envisions updating the report.

Although the Washington agricultural region produces a wide variety of food and fiber, there are very few food products for which local farmers meet the region's demand (Table 2). For example, the region only produces 391 acres of tomatoes, yet approximately 16,972 acres would be needed to meet regional demand for all related tomato products (e.g., tomato sauce and paste, juice, salsa, dried tomatoes, ketchup, etc.). It should be noted that Americans consume roughly three-fourths of their tomatoes in processed form.

Figure 4: The Core Washington Agricultural Region



The only agricultural products that come close to meeting regional demand are milk and corn. The majority of this corn is destined for animal feed for the Delmarva poultry industry, rather than for flour and other corn-derived products. While it is not realistic to expect the region to become agriculturally self-sufficient, market deficiencies do provide new opportunities for expanding small-scale local food production and marketing efforts.

Table 2. COG Region Summary: Meeting Local Food Item Demand (Yes/No)[1]

	Fruits			Vegetables				Starches				Meats			Dairy
Jurisdiction	Blueberries	Strawberries	Apples	Beans	Tomatoes	Pumpkins	Squash	Potatoes	Sweet Corn	Corn-meal	Wheat Flour	Chicken	Beef*	Hogs	Milk
Maryland															
Frederick	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No	No	Yes
Montgomery	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No
Charles	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No
Prince George's	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No
Virginia															
Arlington	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Fairfax	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Loudoun	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No
Prince William	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No

[1]The COG region encompasses approximately 3,600 mi² in Maryland, Virginia, and the District of Columbia
*Note: beef numbers for Frederick County include dairy cattle sold.
Source: USDA NASS 2007 Census of Agriculture

Where Does Our Food Come From?

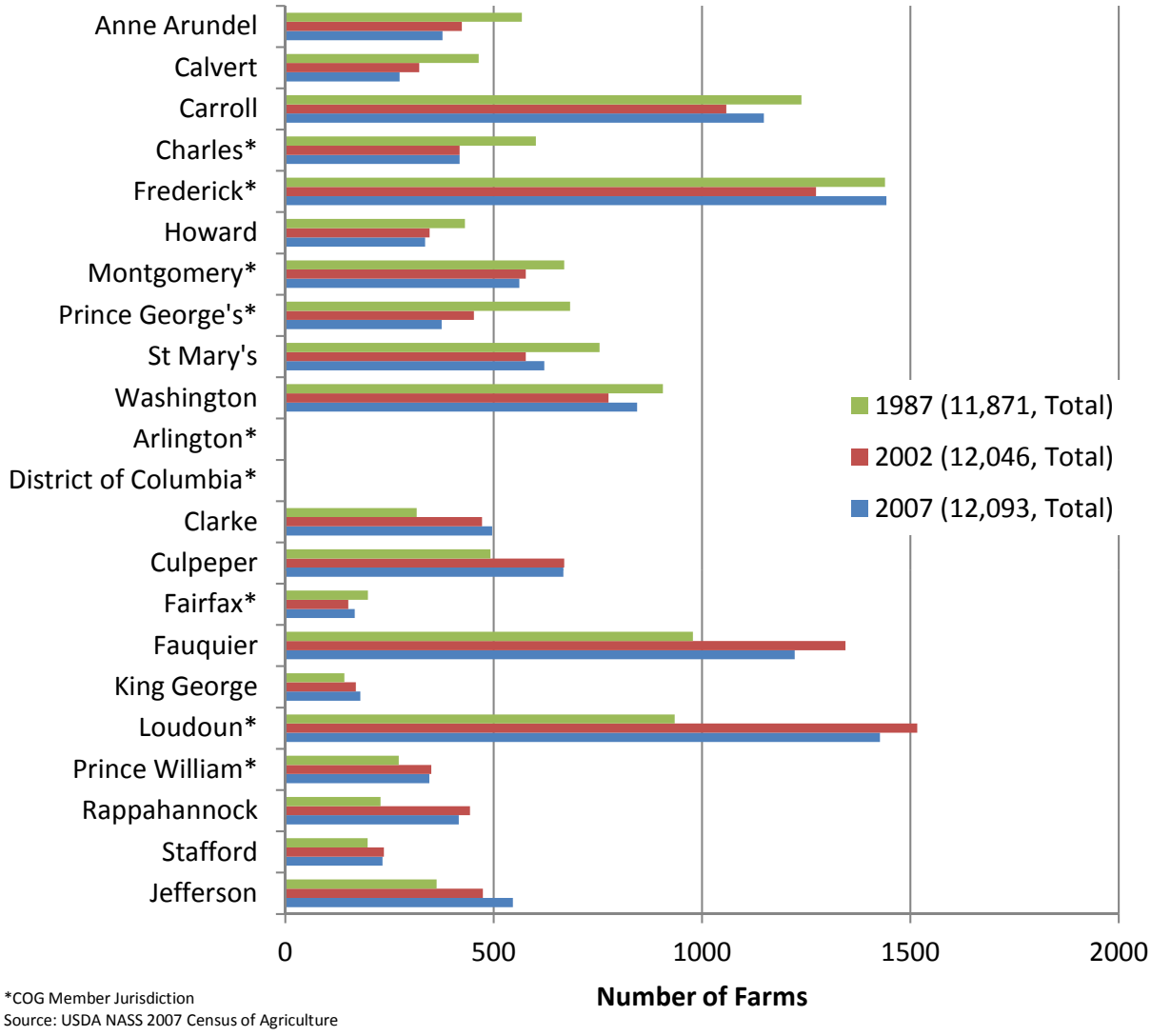
In 2007, there were a total of 12,093 farms in the Washington region (Figure 5, page 5), and regionally grown products made up less than one percent of the total sold. Most of the food consumed here is coming from across the country and is increasingly imported from abroad. Figures 6 and 7, pages 6 and 7, illustrate the region's demand/production gap for select agricultural products (Note: 2002 and 2007 data are shown for comparison, and 2007 was a significant drought year). There are almost no food crops produced at high enough levels to satisfy market demand (For a more detailed breakdown of crops, please see Appendix 1).

Over the past 50 years, agriculture in the U.S. has become very centralized, with certain states producing the vast majority of particular agricultural products. For example, the top five beef producing states (i.e., Texas, Missouri, Oklahoma, Tennessee, and Kentucky) are responsible for 41 percent of the country's beef production. Pork production is even more concentrated, with the top five state producers accounting for over 65 percent of the total. Iowa alone produces 29 percent of the nation's pork. Figures 8-13, pages 8 and 9, showcase the largest state producers for select agricultural products. Data also show that the majority of the beef, pork, and other products sold in local grocery stores are coming from far beyond the region (USDA, 2007). Outside of specialty stores, farmers markets and CSA's, the food landscape is dominated by large agricultural producers in distant states. Large industrial-scale farms have become the new norm.


Foggy Bottom Farmer's Market, DC

According to Slama et al. (2010), "$16.8 billion is spent annually on fruits and vegetables in Washington DC, Delaware, Maryland and Virginia... less than seven percent of this expenditure represents local production." As previously noted, it is not uncommon for food in local grocery stores and restaurants to have traveled hundreds, if not thousands of miles from places such as Iowa (beef) or California (fruits and vegetables).

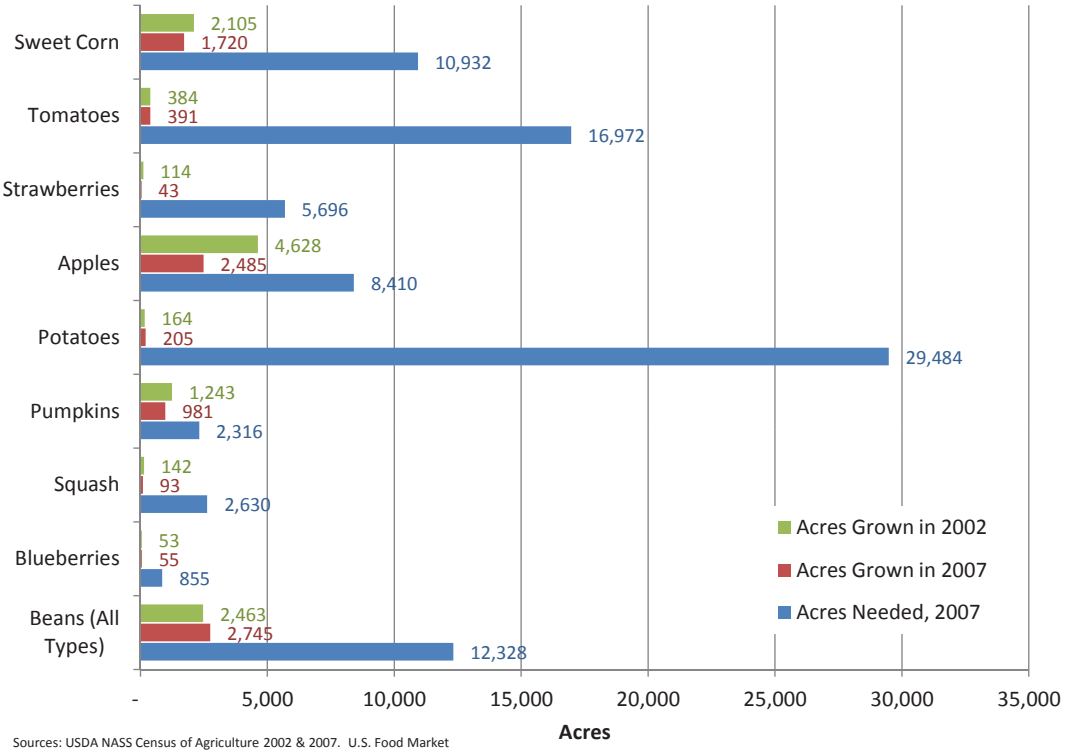
Figure 5: Number of Farms in the Washington Region, 1987-2007



*COG Member Jurisdiction
Source: USDA NASS 2007 Census of Agriculture

Corn and Winter Wheat: Fauquier County, VA

Figure 6: Crop Production Versus Demand in the Washington Region, 2002 & 2007

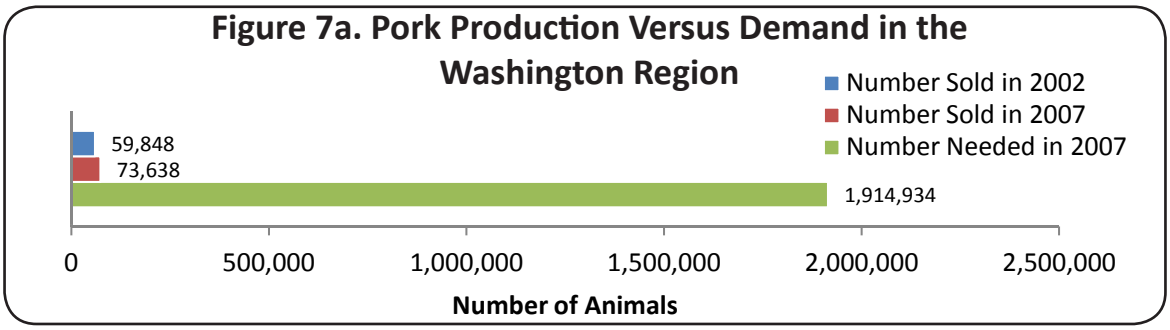


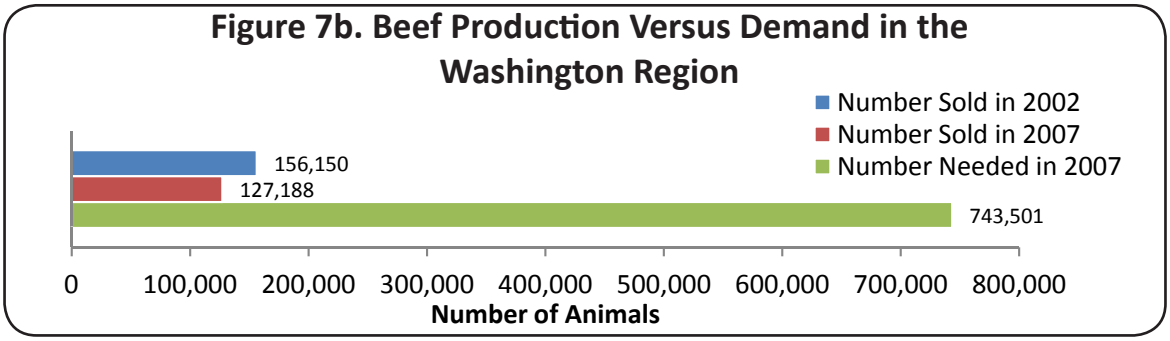
Sources: USDA NASS Census of Agriculture 2002 & 2007. U.S. Food Market Estimator hosted by the Leopold Center for Sustainable Agriculture.

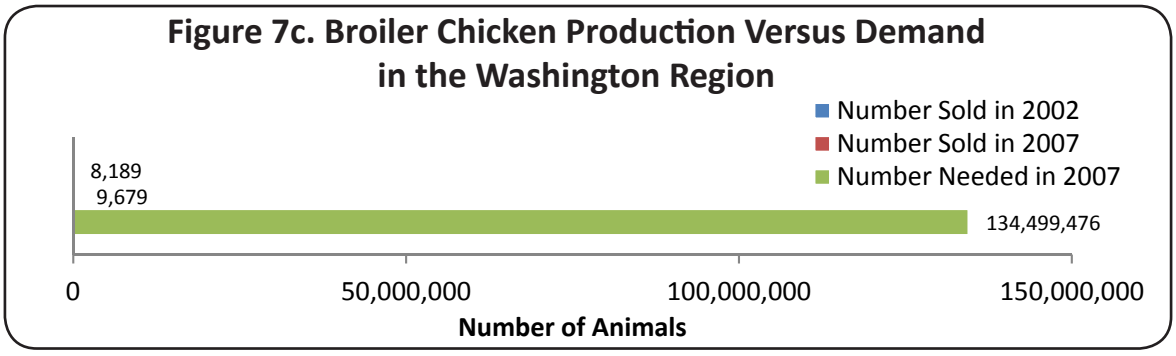
In 2011, U.S. agricultural imports reached $94.5 billion, representing a 20 percent increase over 2010 levels (Source: Outlook for U.S. Agricultural Trade, 2011). As many agricultural tariffs have been renegotiated, greater amounts of imported fruits and vegetables (principally from Mexico, Latin America, Canada and China) are ending up on local supermarket shelves. Not surprisingly, the long distance national and international transport of food creates a significant carbon footprint and with increasingly higher energy prices, eventual added cost to the consumer.

With the consolidation and growing scale of the modern U.S. agricultural industry and importation of more food items from abroad, increased food security and contamination-related concerns and potential problems have arisen. The latter has included recent outbreaks of bacterial-borne illnesses (e.g., E-coli bacteria in vegetables). In most metropolitan areas in the country, local food production (as in the Washington region) is inadequate to satisfy local food demands.

DC - USDA Farmer's Market



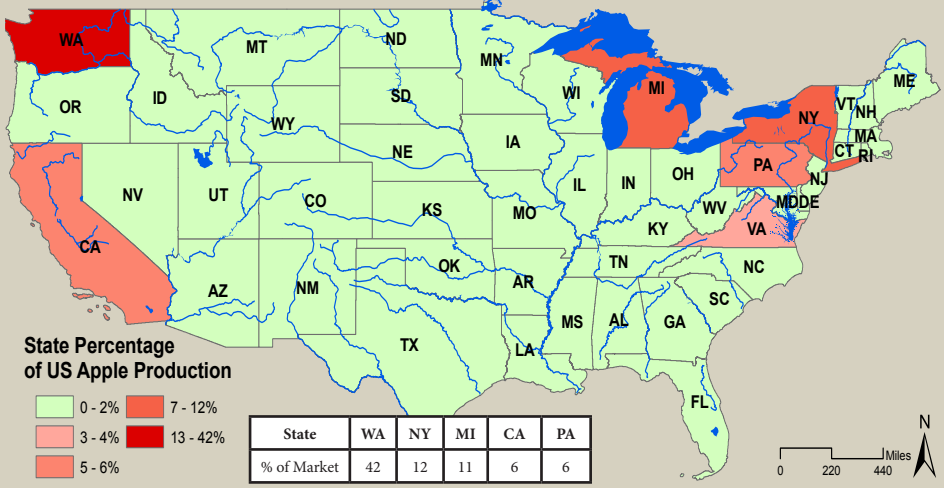





Hogs: Loudoun County, VA

Select National Production Rankings

Figure 8: U.S. Apple Production



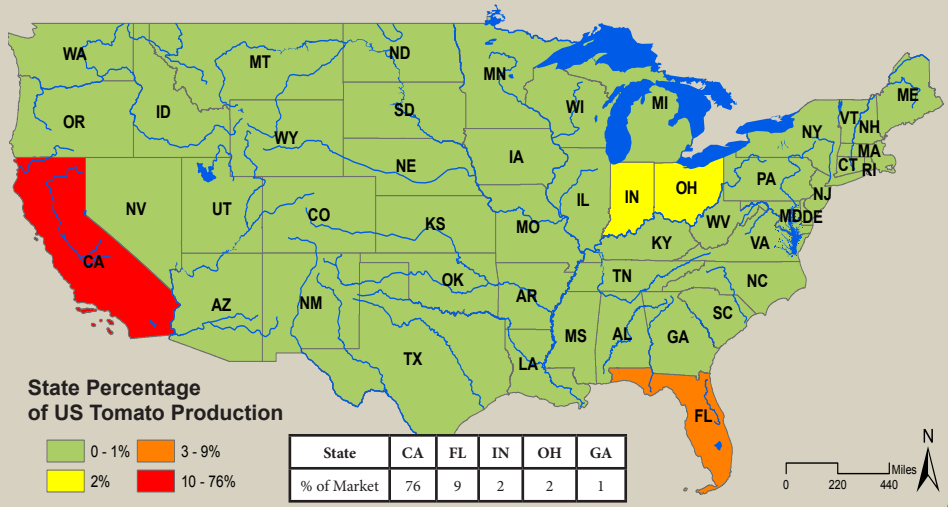
State	WA	NY	MI	CA	PA
% of Market	42	12	11	6	6

Source: USDA NASS 2007 Census of Agriculture

The #1 apple producing state is Washington with 165,215 acres.

The Washington region has 2,485 acres in apple production, 1,235 of which are in Washington County, MD.

Figure 9: U.S. Tomato Production



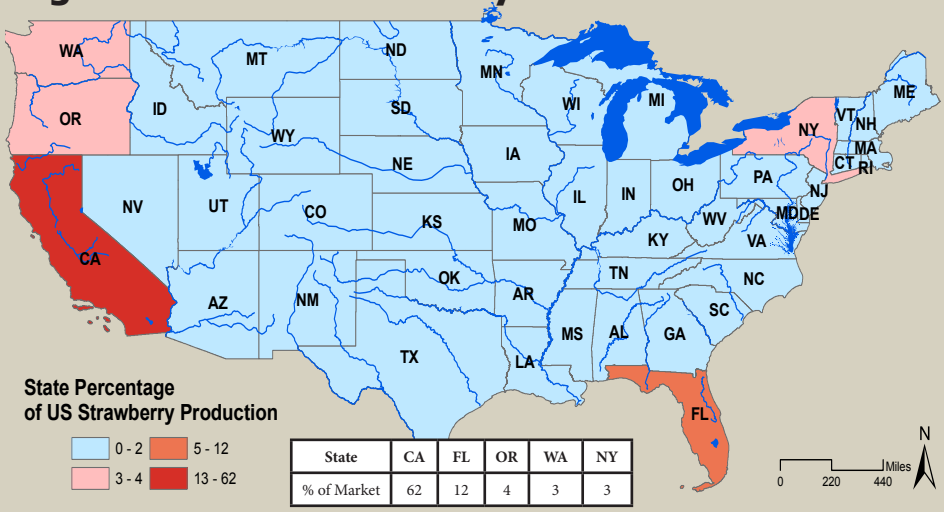
State	CA	FL	IN	OH	GA
% of Market	76	9	2	2	1

Source: USDA NASS 2007 Census of Agriculture

Sixty-eight percent of U.S. tomato production goes to processing - the rest goes to fresh market.

The Washington region has 391 acres in tomato production.

Figure 10: U.S. Strawberry Production



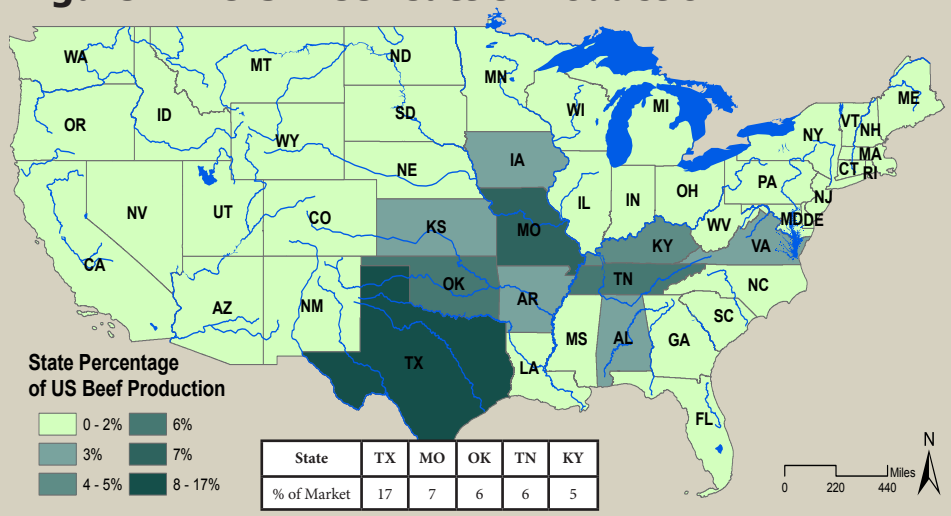
State	CA	FL	OR	WA	NY
% of Market	62	12	4	3	3

Source: USDA NASS 2007 Census of Agriculture

California is the top U.S. strawberry producer with 34,442 acres.

All 43 acres of the Washington region's strawberry production are in Montgomery and Washington counties.

Figure 11. U.S. Beef Cattle Production



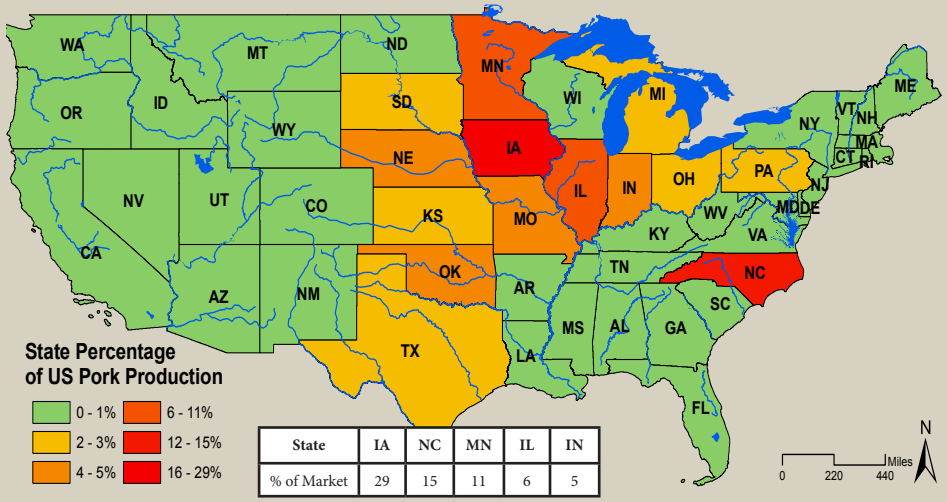
State	TX	MO	OK	TN	KY
% of Market	17	7	6	6	5

Source: USDA NASS 2007 Census of Agriculture

Texas is the top beef producer in the U.S., with 11,841,250 head of cattle sold in 2007.

Fauquier County, VA is the top beef producer in the Washington region with 25,740 head of cattle sold in 2007.

Figure 12: U.S. Pork Production



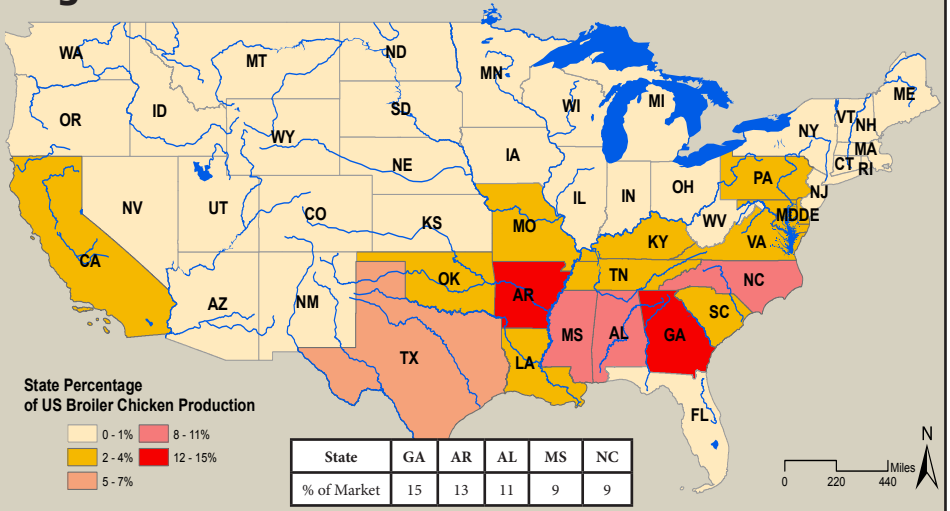
State	IA	NC	MN	IL	IN
% of Market	29	15	11	6	5

Source: USDA NASS 2007 Census of Agriculture

More than 50 percent of all pork products come from Iowa, North Carolina, and Minnesota

Over 50 percent of the pork in the Washington region (44,540 hogs) comes from Washington and St. Mary's counties.

Figure 13: U.S. Chicken Production



State	GA	AR	AL	MS	NC
% of Market	15	13	11	9	9

Source: USDA NASS 2007 Census of Agriculture

Georgia led the U.S. in poultry production in 2007 with almost 1.4 billion chickens.

The Washington region produced almost 10,000 chickens in 2007.

Dairy

Dairy had been an agricultural sector for which the Washington region historically met annual local demand. Although the industry has experienced major declines over the past several decades, things are slowly stabilizing. As of 2007, there were 559 dairies remaining. Of these, Maryland accounted for 73 percent, with the vast majority located in Washington and Frederick counties (Figure 14). Overall, regional milk production remains fairly strong (Figure 15). Although production declined by 24 percent between the 2002 and 2007 census periods, it still almost satisfied market demand for the region. For example, in 2002, the region's dairy industry was a net milk exporter, shipping primarily to southern states. However, the dairy industry is not without its struggles. Milk prices have historically been volatile but have increased since their recent low in 2009. There is also a very real possibility that the threat of cheaper, non-regional milk and other dairy products could flood the market and put local dairies out of business. In addition, the current high price of corn and related feed is further increasing local production costs.

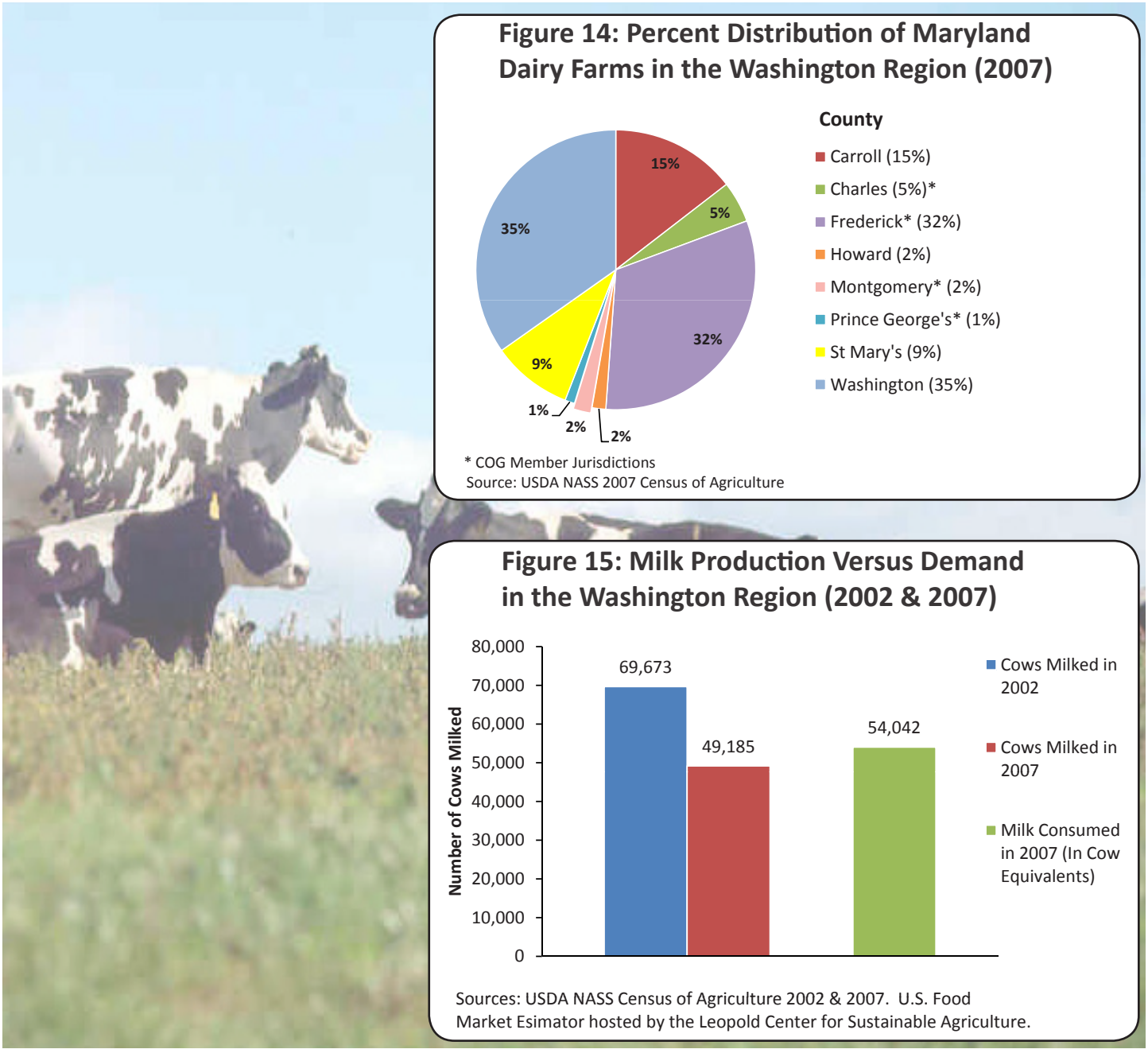


Figure 14: Percent Distribution of Maryland Dairy Farms in the Washington Region (2007)

* COG Member Jurisdictions
Source: USDA NASS 2007 Census of Agriculture

Figure 15: Milk Production Versus Demand in the Washington Region (2002 & 2007)

Sources: USDA NASS Census of Agriculture 2002 & 2007. U.S. Food Market Esimator hosted by the Leopold Center for Sustainable Agriculture.

Regional Relationship: Poultry and Grain


Corn Field: Frederick County, MD

As previously mentioned, much of the region's 1.5 million acres of agriculture is used for growing grain, specifically corn and soybeans. The reason for this is that the region's grain farmers are located close to an extremely large grain user (i.e., the Eastern Shore poultry industry). Nationwide, the poultry industry on the Eastern Shore ranked sixth, and in 2009 produced in excess of 550 million birds. That number is equivalent to 96 birds for every man woman and child in the Washington region! In 2009, the Delmarva chicken industry consumed over 98 million bushels of corn and soybeans for chicken feed (Source: Delmarva Poultry Industry, Inc, 2010). While much of this grain came from Eastern Shore grain farmers, a significant amount also came from Western Shore farmers.


Soybean Field: Montgomery County, MD

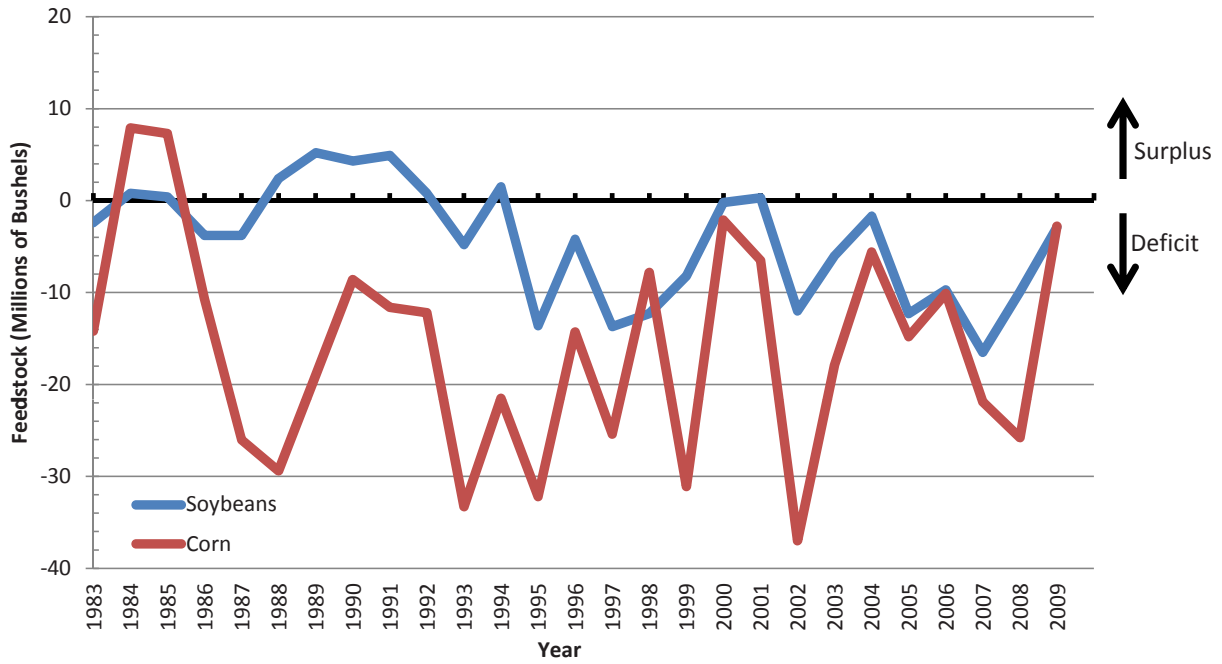
As shown in Figure 16, page 12, since the mid 1980s Eastern Shore grain producers have been unable to fully meet the Eastern Shore poultry industry's demand for grain. This is due to many factors, including increased poultry production levels through the 1990s and a reduction in available farm acreage (Chase, 2003). This deficit has allowed farmers from the geographically closer Washington region to sell their corn and soybeans on the Eastern Shore and receive a higher price than if sold to more distant markets. This relationship between poultry and grain has allowed local grain farming in the region to remain sustainable.

However, there are possible problems looming on the horizon. The Delmarva peninsula had a peak of 623 million birds raised in 1995, and production has since been slowly declining; there were 559 million birds raised in 2009. Other poultry producing states such as Georgia and Arkansas are now able to raise chickens at lower cost than the Delmarva chicken industry. This is due to a myriad of factors including, but not limited to, weaker environmental regulations,

cheaper labor and the lower cost of grain and other basic inputs. A decline of the Delmarva poultry industry threatens the future of local grain farmers.

While many facets of the Eastern Shore poultry industry are controversial, it is important to look at it in totality and recognize that it is providing an important market that helps support Western Shore grain farmers. If grain farming in the Washington region were no longer viable, many more farmers would be forced to sell or subdivide their land. The decline of the Eastern Shore's poultry industry should be taken very seriously by everyone in the Washington region. Policy decisions affecting the poultry industry should consider the negative effects on the regional agricultural system.

Figure 16: Delmarva Broiler Feedstock Deficit



Note: Deficit represents net feed grain needs for boilers unmet by Delmarva grain producers.
Sources: Delmarva Poultry Industry, Inc.; USDA, NASS 2007 Census of Agriculture

Local Agricultural Challenges

As previously stated, agriculture contributes approximately one billion dollars annually to the Washington region's economy and provides jobs for a large number of families and individuals, especially in the more rural jurisdictions. Agriculture is also the single largest employer in both Maryland and Virginia, providing over 850,000 jobs, total. In the Washington region, agriculture faces many challenges, the largest of which is human population growth and farmland conversion to urban development. With the population expected to increase by 39 percent by 2040, already limited resources such as remaining agricultural land, water supplies, and agricultural support services such as local meat processors, equipment dealers, and feed and fertilizer suppliers will be further strained (Growth Trends to 2040, 2010).

Farmland For Sale: Charles County, MD

Value of Farmland

Both urbanizing and more rural counties will have to determine how to better balance their growth priorities so as to not significantly impact agriculture. Part of the challenge of balancing growth with the need to retain agriculture is the long-standing mindset that agricultural land is just vacant land. In the minds of many, this land is not being used to its highest and best potential, nor does it provide much in the way of tax revenue. However, this is not the case. In fact, according to the American Farmland Trust, the median ratio of services-related expenditure to tax revenue for residentially zoned land is one dollar spent for every eighty seven cents taken in. Typically, farmland requires far fewer local services such as schools, fire, police, public water and sewer, roads and other infrastructure. Importantly, whereas residential land tax revenues do not cover service costs, agricultural land tax revenues well exceed them (Table 3).

For decades, local farmers have also faced hard choices about the future of their lands. Higher taxes and land values are pressuring many farmers to sell. This problem is magnified by the aging farmer population in the region. Many of these farmers often have no children interested in taking over the farm when they retire. Thus, a growing number of farmers are selling their land as they retire or can no longer farm. From an estate settlement standpoint, cash is easier to divide than land.

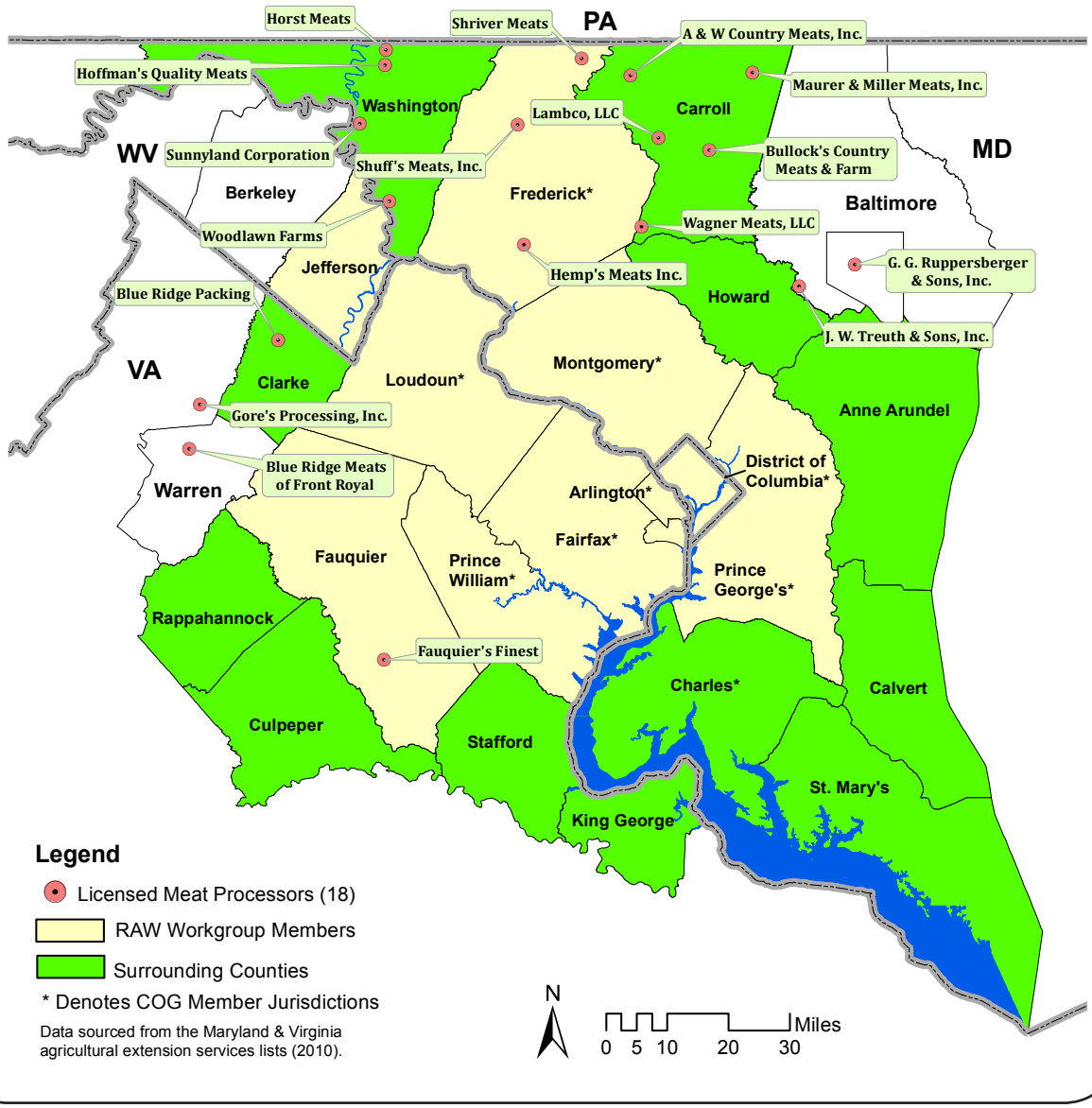
Table 3: Public Service Expenditure Dollars Versus Tax Revenue Dollars (2002 National Average Ratio)

State	Residential	Commercial/ Industrial	Farms/Forest Land
Minimum	1 :0.47	1 :1.03	1 :1.06
Median	1 :0.87	1 :3.45	1 :2.70
Maximum	1 :0.98	1 :20.00	1 :50.00

Source: Dorfman et al., 2002

Farmers that are actively farming or expanding continue to experience their own set of challenges. For example, new sets of federal, state and local regulations often make it costly and time consuming for farmers to construct new buildings, drill new wells, build new irrigation ponds and farm. Many counties in the Washington region have created zoning and building codes that, in many ways, have had unintended negative consequences on farming. Quite commonly, farmers must seek variances or special exceptions to construct taller structures such as corn silos or grain elevators, or to operate a small sawmill. Zoning and regulation have also taken their toll on reducing the availability of critical agricultural support services. For example, there are now only 15 meat processors remaining in the Washington region, and most of these are located on the fringes (Figure 17). The remaining processing facilities often have scarce capacity for new orders arising from the increase in the sale of locally raised meats. Thus, many local farmers have to drive long distances to Pennsylvania and elsewhere for these services. Current county ordinances and USDA oversight make it unlikely that new processors will become established anytime soon within the region.

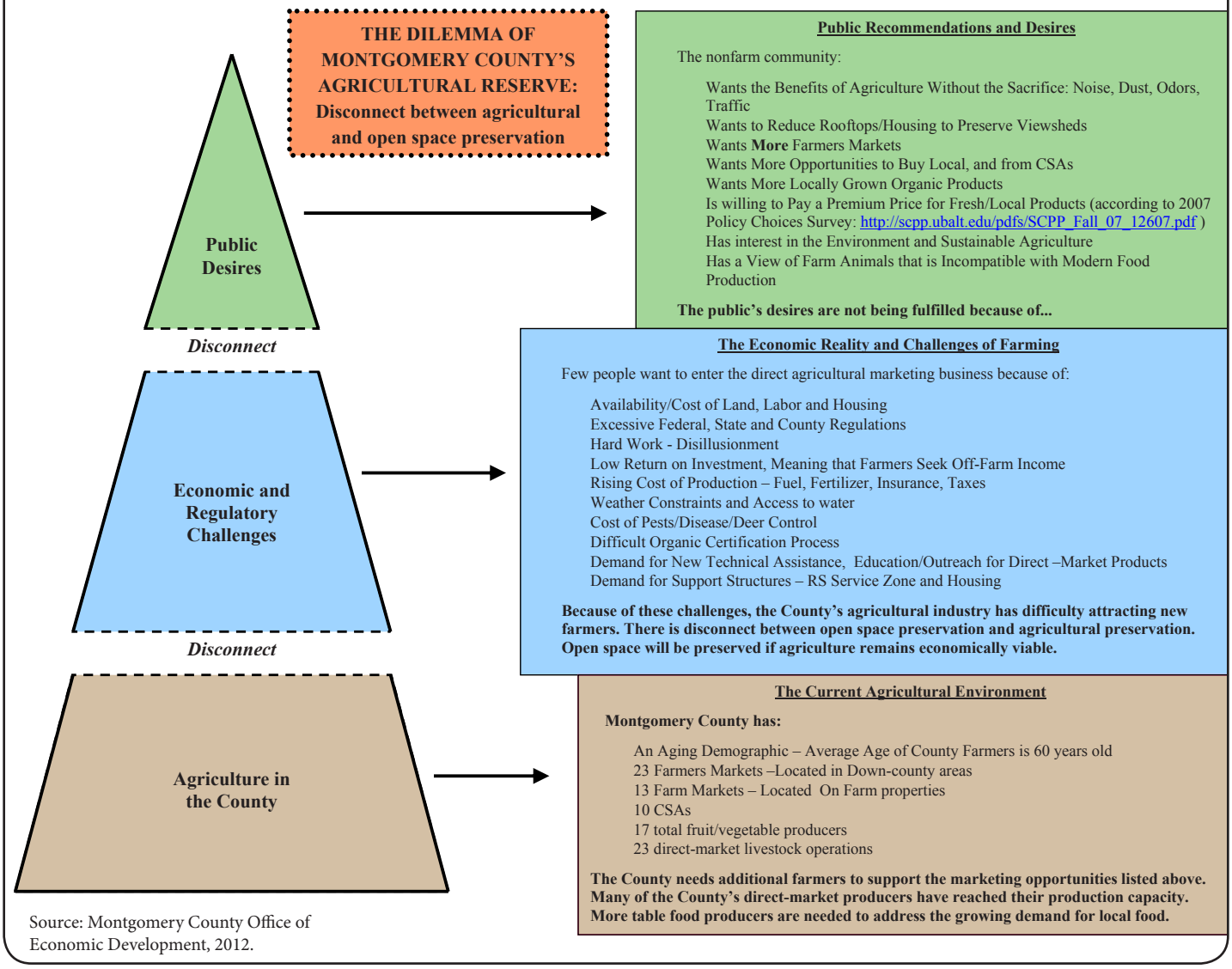
Figure 17: USDA Certified Meat Processors



Most Frequently Reported Impediments To Agriculture

While local farmers in the Washington region face many impediments, there are eight that are most frequently noted. These are described in the following bulleted section, pages 16-18, and graphically summarized for Montgomery County in Figure 18.

Figure 18: The Dilemma of the Montgomery County Agricultural Reserve



Source: Montgomery County Office of Economic Development, 2012.

- **Aging Farmers/Not Enough New Ones**

It is well known that the overall farmer population is aging and declining in number. Nationally, the average farmer is 52 years old. In the Washington region the average age is 57. This aging population problem is a real concern. Failure to recruit new farmers in a timely fashion could ultimately result in a collapse of the region's local agricultural base, and with it the food and associated environmental and economic benefits it provides.

Farming is a business. It is also hard work, does not generally pay as well as many other professions, and in parts of the country still carries a social stigma. Being a successful, long-term farmer is not that easy. It requires a comprehensive knowledge and skill set which is not necessarily acquired through a college degree. Rather, apprenticeship, some timely mentoring and many years of actual hands-on-experience are normally required. Lack of agricultural education in the school curriculum and the general lack of public support are two additional problems. Thus, the recruitment of new farmers remains low. However, one potential regional bright spot is that pilot farm incubator and agricultural education programs for prospective young farmers are underway in Montgomery and Prince George's counties.


Farmers Stacking Straw: Loudoun County, VA


Recent Suburban Development: Fairfax County, VA

- **Farmland Fragmentation**

Farmland fragmentation, which is a byproduct of land subdivision and urban sprawl, has many negative impacts on agricultural economies. First and foremost is that remaining farmers are forced to travel greater distances to reach agricultural support services. This results in more hours worked, increased fuel costs, and decreased profits. In addition, there is an overall loss in agricultural production and efficiency. Fragmentation also brings more new residents into areas once predominantly agricultural; thereby, increasing the chances for potential conflict. Many of these new arrivals are not accustomed to (or have an understanding of) the sights, smells, and sounds of working farms, nor the slow speed of tractors traveling down narrow public roads.

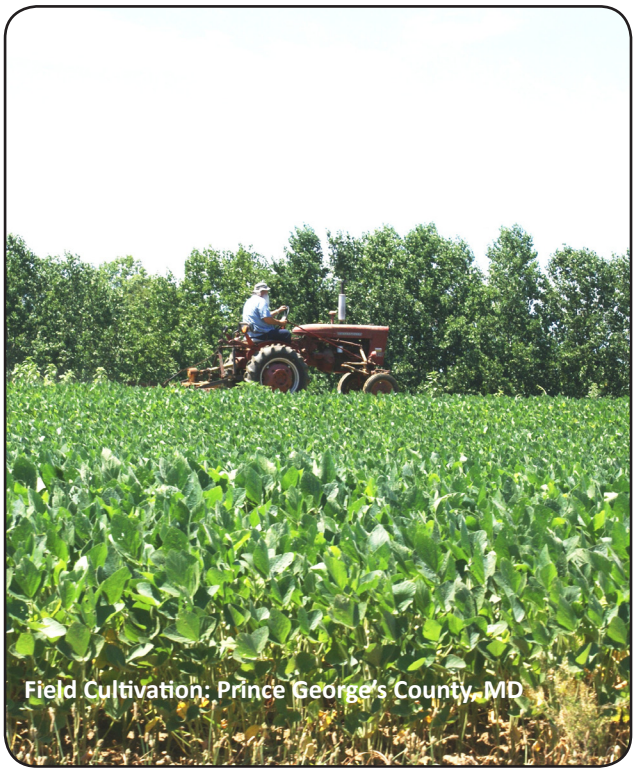

Farm Incubator: Prince George's County ECO Farm

- **High Land Costs**

Farmers in the Washington region must compete with a growing human population and associated development that is constantly expanding from the region's core. For decades, this growth has driven up real estate prices, and this upward trend is unlikely to change anytime soon. High real estate prices mean that it is often very difficult for new starting farmers to purchase land and equally hard for existing farmers to expand their operations. Unquestionably, the cost of land is the biggest hurdle for new farmers to overcome. With the average price of an acre of land in the Washington region exceeding $75,000, many young and aspiring farmers end up renting (or leasing) land. This is because they are either unable to afford mortgage payments solely off of farm-derived income or are unable to obtain a bank loan.

- **Labor (Costs, Housing and Benefits)**

Nationally, farm labor continues to be a major problem, especially for fruit and vegetable growers that are heavily dependent on manual harvesting. Farmers in the Washington region similarly face frequent labor challenges. In addition to labor shortages, local farmers are often further constrained by high labor costs, unavailability and affordability of worker housing, insurance requirements and/or regulatory restrictions and hurdles associated with providing housing for agricultural employees.


Field Cultivation: Prince George's County, MD

- **Loss of Critical Support Services**

As farming in the Washington region has declined, many of the required support services such as repair shops and equipment dealers have closed or moved further out. This has created a situation where, for example, the region's poultry and beef farmers are transporting their animals to places as far away as Delaware and Pennsylvania for processing. New laws and various restrictions also make it difficult to open new slaughter houses and packing plants in the region. Tighter state and county government budgets have also reduced the amount of money available for agricultural programs such as land conservation. To a growing extent, this has also resulted in a reduction in state and county agricultural extension programs, services, and personnel. In the current economy, some urban communities see less of a need for maintaining agricultural specialists on staff.

- **Regulations (Environment and Health)**

Increasingly, the region's farmers are dealing with new, well-intended regulations aimed at improving environmental quality and protecting public health. State Total Maximum Daily Load (TMDL) requirements are making farmers throughout the Chesapeake Bay watershed develop and implement nutrient management plans. This has resulted in many local farmers having to install new manure storage sheds and treatment systems, fencing to keep livestock out of streams, grassed waterways, and other nutrient reduction techniques. In addition, many of these same farmers are challenged with new health and safety standards aimed at agricultural practices, such as Good Agricultural Practices (GAP) and other certifications, required for farmers who want to sell their products to wholesalers. While all of these regulations and reporting requirements serve the greater public good, farmers are doing more time consuming paperwork and are incurring more out of pocket expenses to stay in compliance.

- **Restrictive Zoning**

While zoning is often used as a tool for helping to preserve agricultural lands, it can also unintentionally place undo restrictions on it. For example, some counties in the Washington region have building height restrictions within their zoning codes that require farmers to seek variances for building tall silos and/or large barns, as well as for increasing the amount of impervious surfaces. Many counties also restrict on-farm activities and uses such as meat processing, operating a creamery, food packing, and the size and operation of farm stands and other non-traditional agricultural activities. As counties become more urban, they typically enact zoning regulations that are more favorable toward residential uses, rather than agricultural ones.

- **Water Availability**

Many farmers in the Washington region are also faced with a variety of water supply-related challenges. For example, the drilling of a single new irrigation well generally costs thousands of dollars, and both the volume and quality of the water needed are not always guaranteed. Compared to traditional field crops (such as corn and soybeans), vegetable production, using drip irrigation, generally requires far more water.

Growing vegetables in the mid-Atlantic without irrigation is risky and can be very costly. A general rule of thumb during summer, when vegetables are maturing, is 0.50 GPM/100 feet of drip line for 2-3 hours to provide adequate watering (Hunsberger et al., 2010).

In those localities where surface or groundwater sources are either insufficient or unavailable, farmers must alternatively find a suitable source or purchase (if available) relatively expensive, municipally-supplied and treated water. Competition for both ground and surface water in the Washington region continues to grow with each passing decade. Newer environmental regulations have also generally made it more difficult for farmers to build new ponds or dams.


Grain Silos: Frederick County, MD

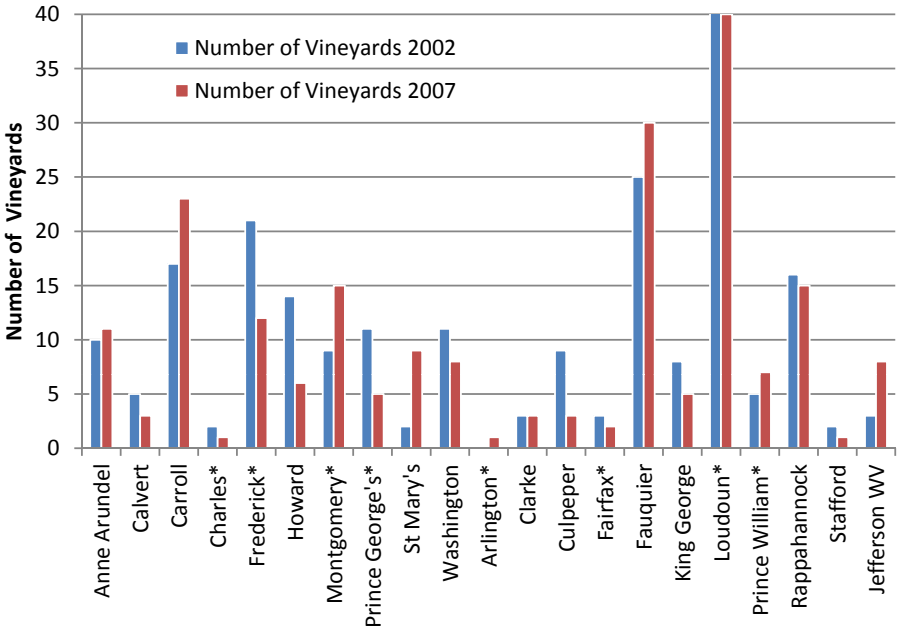

Pasture and River: Fauquier County, VA


Beef Cattle: Loudoun County, VA

Opportunities

Compared to agribusiness, small local farms are, from both a cost and production standpoint, at a competitive disadvantage. Only recently have consumers demanded high-quality, locally grown foods and have been willing to pay more for them. This national 'Locavore' movement has helped to create and support a growing 'niche agriculture' sector in the Washington region. It has also benefitted from the success of the organic food movement.

Figure 19: Number of Vineyards In the Washington Region, 2002 & 2007



* Denotes COG Member Jurisdictions
Source: USDA NASS Census of Agriculture 2002 & 2007.

Local Food and Wines

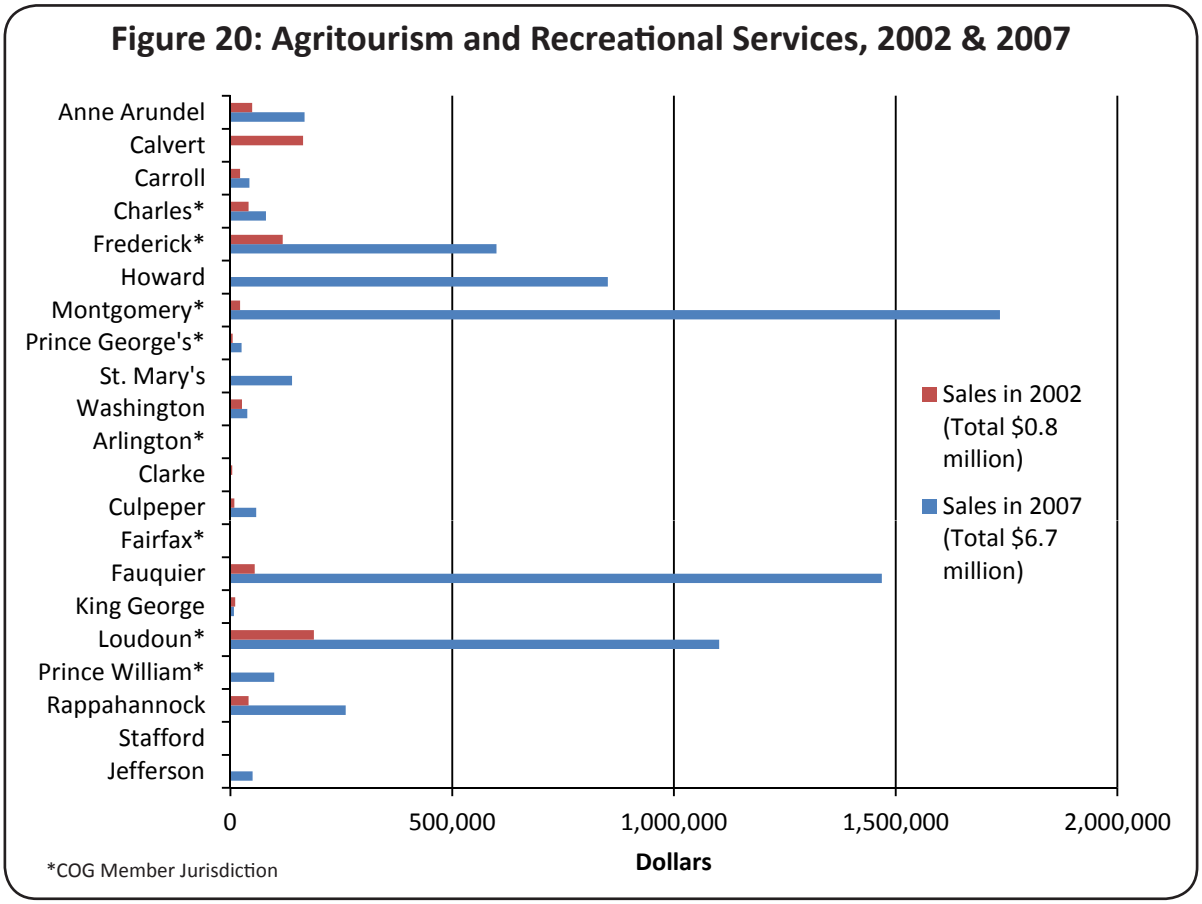
While the Washington region's farmers face many challenges, there are new and expanding opportunities for them to diversify. The high demand for fresh local foods in the region attracts farmers from as far away as southern Pennsylvania and West Virginia to area farmers markets. Local food consumers take pride in knowing both the farms and the farmers from where their food is grown.

In many instances, the Washington region's business-savvy farmers are doing a good job of responding to this new market. Some are shifting away from more traditional row crops and planting tomatoes, sweet corn or other table fare. At the same time, there is a fledgling crop of new local farmers who are farming smaller plots with the primary purpose of selling direct to the consumer.

The Washington region has also experienced tremendous growth in the 'high end' agricultural sectors (e.g., wine, specialty meats and dairy products). For example, the wine industry in Virginia and Maryland has grown rapidly in recent years (Figure 19). In Virginia, the number of vineyards has increased by 77 percent since 1995. Most of these new vineyards have opened in Loudoun County and Fauquier County, Virginia (40 and 30 vineyards, respectively, as of 2007). Similarly, new vineyards (as well as some new local micro-breweries using locally grown grains and hops) have also opened in Maryland.

Agritourism

A beneficiary of the local food movement, 'Agritourism' is a growing sector of the local farm economy. Many farms are attracting tourists by hosting on-farm activities such as corn mazes, pony and wagon rides, and pumpkin patches as seasonal extenders to traditional farm operations. These events help to diversify and stabilize their annual income stream. As seen in Figure 20, page 20, agritourism in the Washington region contributed approximately $6.7 million to the local farm economy in 2007.

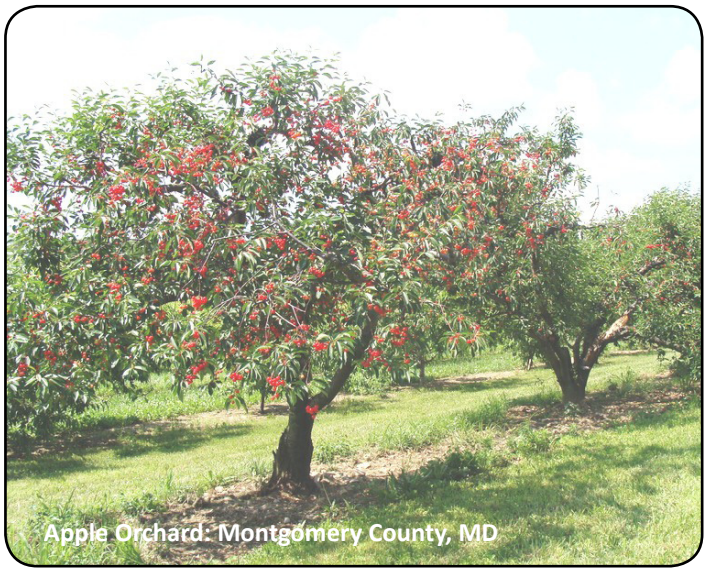


Community Supported Agriculture

Community Supported Agriculture (CSA) represents another growth area for small local farmers. Generally, subscribers pay a membership fee in February to receive weekly shares throughout the growing season. Typically, these shares consist of vegetables, fruits, eggs, dairy products, herbs, meat and cut flowers. The CSA system provides the farmer with a more stable customer base and provides funds in advance of the planting season. The number of subscribers per CSA farm in the Washington region is highly variable, with ranges from as low as 25-30 to over several hundred. Some CSA's waive membership fees in exchange for contributed labor. Currently, there is more demand than supply for CSA shares, as most sell out before spring. CSA's have grown five-fold in the Washington region in the past decade with over 70 participating farms in 2012.

Local Experiences

Montgomery County, Maryland


Apple Orchard: Montgomery County, MD

What Is Montgomery Doing To Support Agriculture?

Montgomery County has long been a leader in agricultural land preservation. The County was a national pioneer in the transferring of development rights as a tool to preserve land. In 1980, the County adopted its "Preservation of Agriculture and Rural Open Space" master plan, which designated an 89,000 acre agricultural reserve in the western part of the county. Over the past thirty years, Montgomery County has aggressively preserved agricultural land through its conservation easement program. The Agricultural Reserve now encompasses some 93,000 acres, or nearly one-third of the County. It is important to note that Montgomery County has the highest population in the entire state of Maryland (971,777 in 2010), yet still supports over 500 agricultural operations contributing over $243 million annually to the local economy.

Montgomery County also requires a real estate disclosure, signed by anyone moving into the Agricultural Reserve, that agriculture is the preferred and intended use and that all agricultural operations are permitted at all times, including the operation of farm equipment.

Montgomery County has also long supported agriculture through its Agricultural Services Department, which has been responsible for a number of innovative projects, including the County's first farm incubator program. This program was designed to help mentor and ultimately establish a new crop of farmers. The County has a well-established "one stop shop" for all agricultural agencies and services provided to the rural and agricultural communities co-located at its Agricultural History Farm Park in Derwood.


Montgomery County Agricultural History Farm Park, MD

What Are The Challenges?

As Montgomery County continues to grow, it must also expand its outreach and education to the general public on the importance of the Agricultural Reserve and farming. With limited public resources, it will become increasingly difficult to sustain agricultural programs and services over the long-term with just traditional funding sources.

While Montgomery County's Agricultural Reserve has saved thousands of acres of farmland, it has not fully met its goal of sustaining the full suite of agricultural activities and support services. For example, economic and market factors have resulted in large lot residential development in

the Agricultural Reserve. This, together with the generally decreasing number of farms, has further eroded agricultural support services, such as tractor dealerships and farm supply stores.

What Are The Top Three Lessons Learned?

1. The preservation of the Agricultural Reserve is much easier than identifying and approving receiving areas to accommodate higher densities and congestion.

2. The preservation of the Agricultural Reserve represents a tradeoff or contract for Down County residents accepting higher land use densities and congestion.

3. The measured success of a preservation program is dependent upon government simultaneously identifying the areas to be preserved through public and private investments, as well as the areas to accommodate the development.

A Snapshot Of Montgomery's Rural Economy:

- 561 farms, 27 percent female principal operator
- 71,622 acres of farmland protected
- Expanding hay industry feeding a growing horse population of nearly 10,000 animals
- Over 1.0 million bushels of corn for grain harvested on 12,675 acres
- 279,039 bushels of soybeans harvested on 11,688 acres
- 244,446 bushels of winter wheat grown on 4,161 acres
- 80 beef cattle farms (ranked 8th among all MD counties in 2007)
- 49 fruit, vegetable, and/or nut farms
- Seven sod farms, 150 landscape, arborist, and lawn care businesses
- Economic contribution to County's economy - $243,378,896/year

Frederick County, Maryland

What Is Frederick Doing To Support Agriculture?

Frederick County is the largest county in Maryland. What most people don't know is that Frederick County has over 86 percent of its land zoned either Agriculture or Resource Conservation. This creates an opportunity for the County's farmers to provide food and other agricultural products and services for the region. Table crops and non-traditional agriculture are the fastest growing sectors in the County. Frederick has the most land in organic agriculture (24 Maryland Department of Agriculture certified organic farms in 2011) while seeing a large growth curve in farm wineries and farm breweries. In addition to the non-traditional growth, the County continues to lead the state in dairy and beef production. The grain farmers continue to use Best Management Practices to generate high yields while preserving their soil and ultimately the Chesapeake Bay. The County strives to make farming in Frederick a priority by being more farm-friendly through efficient permitting

Agricultural Landscape: Frederick County, MD

process, land preservation programs and a strong right to farm ordinance. Several marketing programs are in place to promote on-farm sales, farmers' markets and agritourism events. This is all highlighted with the County's Family Festival at the Farm, which is held the third weekend in October, annually.

What Are The Challenges?

While agriculture continues to be an important part of Frederick's economy, suburban development continues to eat away at farmland. This is especially the case along the I-270 corridor and around the City of Frederick. Population growth will also continue to be a challenge.

State regulations continue to be a challenge to farmers in the County as they compete with farmers from outside the state. The increasing regulations increase the cost of production and decrease their bottom line. Many farmers are diversifying their operations to try to increase their profits to offset these increases in cost.

A Snapshot Of Frederick's Rural Economy:

- 1,442 farms
- Approximately 202,087 acres of remaining farmland in 2007 (ranked 1st among all MD counties); an increase of almost 4,000 acres over 2002
- Beef cows - ranked 1st among all MD counties in 2007
- Hogs - ranked 1st among all MD counties in 2007
- Milk cows - ranked 1st among all MD counties in 2007
- Organic farms - ranked 1st among all MD counties
- 1,850,000 bushels of corn for grain harvested on 26,000 acres
- 844,000 bushels of soybeans harvested on 33,700 acres
- 885,000 bushels of winter wheat grown on 14,000 acres (ranked 3rd among all MD counties in 2007)
- Number one in wineries in MD (nine)
- Economic contribution to County's economy - $130,000,000/year

What Are The Top Three Lessons Learned?

1. The amount of agricultural land preserved to date does not represent the critical mass necessary for the long-term support of farmers and farming.
2. The cost of land, labor and housing is rapidly increasing, and support services are moving out of the County.
3. Greater public and private support will be required to maintain a healthy and diverse agricultural community well into the 21st century.

Corn and Hay: Frederick County , MD

Prince George's County, Maryland

Since the tobacco buyout in 2002, agriculture in Prince George's County has become increasingly diversified. With close to 400 farms in operation, the County offers a little bit of everything from soybeans, corn, hay, specialty vegetables, and livestock to thoroughbred horses. In 2011, the County opened its first winery and creamery in more than 50 years. Prince George's County also has the one of the largest and most valuable equine industries in the state (valued at $196,715,000 in 2010). It is also home to four non-profit farms that educate both young and old about agriculture and environmental stewardship, as well as an urban Eco Farm. And last, but not least, the nation's first agricultural research college – the University of Maryland at College Park and USDA's 6,000 acre Beltsville Agricultural Research Center, the largest, most diversified agricultural research complex in the world are both located in the County.

A Snapshot Of Prince George's Rural Economy:

- 375 farms
- Approximately 37,005 acres of remaining farmland in 2007
- 330,000 bushels of corn grown for grain harvested on 3,800 acres
- 120,000 bushels of soybeans harvested on 3,400 acres
- 31 sheep farms and approximately 358 sheep
- 7,100 horses and equine inventory valued at $196,715,000
- Horticulture - approximately 615,000 square feet (14.1 acres) under glass
- Vegetable production - ranked 8th among all MD counties in 2007
- Five CSA farms
- 18 Farmers markets

What Is Prince George's Doing To Support Agriculture?

In 2010, the Maryland-National Capital Park and Planning Commission (M-NCPPC-PGCO) developed a "Strategic Program for Agricultural Development" and funded an Agricultural Marketing specialist position. The County is also working on updating its 'Right to Farm' legislation to provide greater protection for farmers. Though there are challenges to future funding, efforts are continuing for the acquisition of agricultural easements through state and county programs. Prince George's County has also enacted legislation to expand the types of newer agricultural operations and endeavors that help farmers prosper (e.g., farm wineries, farm Bed and Breakfasts Inns, and equine operations under the definition of "agriculture"). The County also continues to expand agricultural education opportunities for youth and adults through an increasing number of school programs (e.g., Prince George's Community College's Urban Agriculture Certificate Program) and community gardens.

Horse Pasture: Prince George's County, MD

What Are The Challenges?

The landmark tobacco buy-out program will officially end in 2015. As such, farmers who participated in the buyout will be able to sell their land to developers, as there will no longer be a temporary easement on their properties. One potential unintended consequence is that, while this enables farmers to fund retirement or family obligations, it could result in a large turnover of farm properties into residential development.


Fruit Orchard: Prince George's County, MD

Continued suburban development places increased pressure on remaining large blocks of rural land, resulting in further fragmentation of the County's remaining "Agricultural Crescent".

Additional budget shortfalls may make investment in land preservation and agricultural economic development – including needed infrastructure - a "tough sell."

What Are The Top Three Lessons Learned?

1. Residents have to know, and then care, about the farmers in their community. If they are not aware of their value, then they will not vote to invest in the protection of, or spend their money at, these farms. There are a number of opportunities to build on the work that has started to market Prince George's County's agricultural products in the County and the region using cost effective, creative means, but investment in this effort is needed.

2. Legislative changes to the Zoning Ordinance and other sections of the County Code can pave the way for innovation and modernization in the agricultural sector.

3. The average age of a Prince George's County farmer is 59.6 years and new, younger farmers will very soon be needed.


Snap Beans and Sweet Corn: Prince George's County, MD

Loudoun County, Virginia

The rural economy of Loudoun County has continued to prosper as it transitions from a leading traditional agriculture county (livestock, dairy, grain and forages), to a diversified economy of smaller scale, higher value, and new product production. With the increase of new homes and new residents, opportunities to produce and direct market products locally has also increased. Investments in land and production techniques have given way to a new generation of agriculture and rural businesses. Vineyards, equestrian centers, and specialty crops continue to expand to meet local demands of food and recreation.

A Snapshot Of Loudoun's Rural Economy:

- 1,427 farms
- Largest number of female-operated farms in VA (468)
- Largest equine population in VA (15,500 horses and ponies, valued at $208,855,000)
- Largest number of cut flower growers in VA (14 farms)
- Largest number of berry growers in VA (3rd largest acreage)
- Largest number of alpaca farms in VA
- Largest number of wineries in VA (2nd largest acreage)
- 2nd largest number of Christmas tree farms
- 2nd largest acreage of nursery stock production
- 4th largest hay production in VA (64,300 acres)
- 14 Farmers markets/wayside stands

What Is Loudoun Doing To Support Agriculture?

Loudoun County continues to provide a high level of support to agriculture and the preservation of open space. The following services to agriculture are locally funded and supported through county government, or Memorandums of Understanding with state and federal agencies.

- Department of Economic Development: Loudoun is one of only three counties in Virginia to employ a full time Agriculture Development Officer. In addition, the Rural Team provides services in agricultural marketing, education, Agriculture and Forestal Districts program, and promotion of the rural economy.
- Land-Use Assessment Program: a deferral of real estate taxes on property that qualifies for agriculture, horticulture, forestry, or open space.
- Rural Economic Development Council: Members representing industry sectors are appointed by the Board of Supervisors to promote the economic growth and vitality of Loudoun's agriculture, horticulture, equine, and rural business industries.
- Rural Business Development Strategy: Loudoun County is in the process of developing a 10-year strategic plan for the sustainability and growth of agriculture and rural business.
- Education, Marketing and Promotion Events: Spring and Fall farm tours, and Forum for Rural Innovation.


Vineyard: Loudoun County , VA

What Are The Challenges?

- Population growth.
- Loss of productive land, loss of traditional agriculture producers, and loss of agriculture service infrastructure.

- High taxes and high cost of living expenses.
- Loss of equity in property values.
- Operating and investment capital – banks do not offer agricultural-related loans, and some financial institutions will not loan on properties enrolled in land use programs
- Private property rights.
- Wildlife damages.
- Onerous local, state, and federal permits and regulations (especially environmental).


Hay Bales: Loudoun County, VA

What Are The Top Three Lessons Learned?

Loudoun's agriculture industry continues to transition from traditional production uses to a more urban-based, smaller scale, higher value industry. Diversification into new crops, new methods of production, new marketing techniques, and life style changes are being implemented to sustain Loudoun's rural economy. Challenges in educating citizens and decision makers in the production and marketing of products, along with increased regulation on production, have necessitated farmers and rural businesses become more politically active and increase off-farm community involvement.

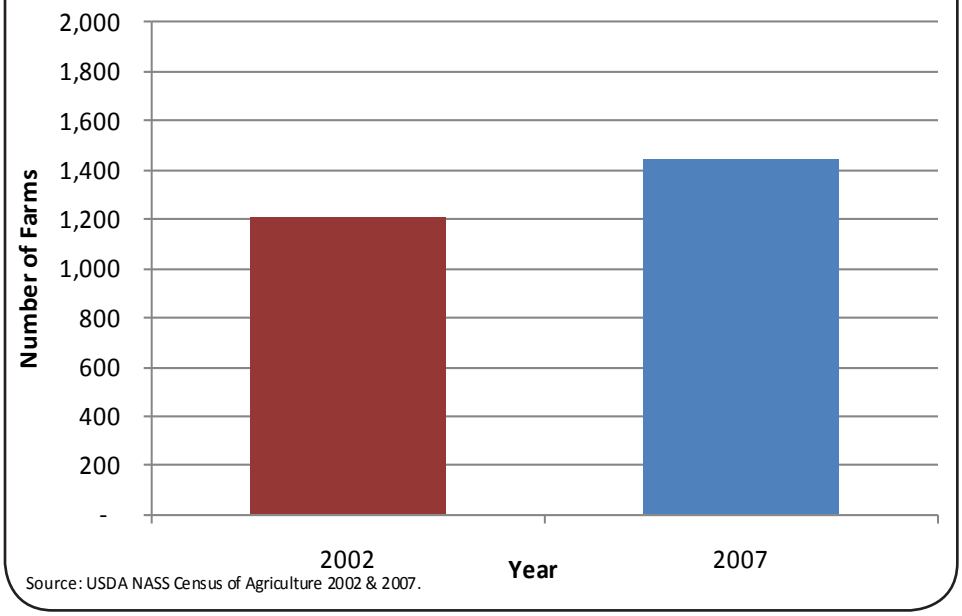
1. Adequate funding for long-term agricultural-related technical and marketing services support remains problematic.
2. The cost of land, labor and housing is rapidly increasing as development pressures continue to grow and fragment remaining farmland.
3. Greater public and private support at the local and state level will be required to maintain a healthy and diverse agricultural community well into the 21st century.

Farmers Market: Loudoun County , VA

The Increasing Demand For Growing Local

FoodNavigatorUSA.com reports that one out of six Americans will go out of their way to buy local products, and that 30 percent are unable to locate them. Locally-sourced fruits and vegetables were the product categories with the greatest consumer interest, with 31 percent purchasing them from local sources at least once per week (Slama, 2010).

Figure 21. Number of Farms In the Region Reporting Direct to Consumer Sales in 2002 and 2007



Source: USDA NASS Census of Agriculture 2002 & 2007.

Over the past decade, the Washington region has experienced a large increase in the demand for locally grown and raised agricultural products. Much of this growth is the result of people becoming more concerned about where their food comes from and how it got to their plates. This local food movement grew out of a genuine concern over the quality and environmental impact big agriculture was having on the land and people's lives. The region's high median household income ($57,291, ranked 2nd nationally in 2010) has also helped fuel the region's increased demand for local foods. This relative affluence has allowed people to spend more on what they view as superior products.

Indicators of this increasing demand for local foods include a 17 percent increase in both the number of farms (Figure 21) and farmers involved in direct to consumer sales activities such as farmers markets. In 2010, the Washington region could boast that it had over 150 of these markets (www.nationalcapitalfarms.org). The region has also seen growth in the number of CSA's, some of which have weekly memberships numbering in the hundreds. Local and national retailers, such as Mom's, Yes, and Roots Organic Markets, Whole Foods, select Giant's and Safeway's, as well as Harris Teeter, have all responded in positive fashion to the growing eat local food trend. The Washington region now has a number of these national retailers sourcing seasonally available "local" foods and then labeling them as such.

Local food demand has also been increasing in the wholesale business, especially since many of the region's top restaurants have begun to feature seasonally available local foods on their menus. Currently, there are over 100 restaurants that have at least one local option on their menus (www.nationalcapitalfarms.org). The final market that has seen growth in local food is institutions. A number of area hospitals and public school systems have started to source a percentage of their daily food needs from local farms.

Sweet Corn: Beltsville, MD

In many ways, the Washington region's farmers are still working out how to best respond to these new markets. Some traditional farmers have set aside acreage for growing fruit and vegetables, while others have opted to slaughter and sell a percentage of their animals locally. In other cases, new farm operations have started. Local governments have also taken note of the buy local trend in agriculture. They have helped establish more farmers markets, provided technical assistance, started farm incubator/or new farmers training programs, (e.g., Prince George's and Montgomery counties) and in some have cases have become involved in incubating hybrid wholesale food cooperatives and aggregation services (Loudoun County). Although there is a strong market demand for local agricultural food products, low overall production and generally thin profit margins remain problematic for new farmers.

Vegetable Production: Montgomery County, MD

"You, as a food buyer, have the distinct privilege of proactively participating in shaping the world your children will inherit."
- Joel Salatin

Summary Recommendations and Next Steps

Agriculture in the Washington region is only able to currently produce a small fraction of what the local population requires, especially when it comes to fruits and vegetables. However, there is hope that with continued strong consumer interest in and demand for local foods, that the number of local farmers involved in direct to consumer sales will continue to rise. The market for these products exists and many state and local governments now see local agriculture as a long lasting element. Jurisdictions within the Washington region continue to respond in new and unique ways to this shifting face of agriculture. Some have started to go further than simply sponsoring weekly farmers markets and a few have recently begun new/young farmer education programs (Prince George's County ECO Farm, Montgomery County Farm Incubator). Some have developed clearinghouses for services and land (Southern Maryland So Good and the Maryland Farm Link Program). Others have started addressing supply chain issues through incubator programs (Southern Maryland Meats), begun developing a food aggregator (Loudoun County Food Hub), or working out the logistics to get farm to school programs up and running.

It is recognized that agricultural problems and opportunities in the Washington region are generally best addressed through cooperative regional approaches and initiatives. As such, two new COG region initiatives (Region Forward and Economy Forward) represent potential starting points for greater regional agricultural dialogue and cooperation, as well as further support for local agriculture and related economic planning integration. The Region Forward goal is to maintain 450,000 acres of agricultural lands in the COG region.

Regional Agricultural Workgroup recommendations for the support of 21st century agriculture in the Washington region are as follows.

Recommendations:

- Political leaders and decision makers in the Washington region need to come together to formulate a strategic agriculture support plan and agree upon those steps and measures that will help sustain local agriculture through the 21st century. This could be accomplished through leadership provided by the COG Board working in partnership with local member and non-member jurisdictions and municipalities;
- Comprehensively examine and, where appropriate, remove and/or modify regulatory-related obstacles to local farmers. For example, fast-track variance and special exception case reviews for typical agricultural-related building requests, and explore the possibility for reducing associated filing/permit fees;
- Inventory public lands that could potentially be used in the near future for the establishment of either a first class, permanent farm incubator training facility or a local processing facility. Note: implementation options include but are not limited to: floating county bonds, creating new public-private partnerships, actively soliciting donations, etc;
- Provide new and additional tax incentives that promote local farming and related support services. This could include new tax deductions for county sponsored farming assistance programs and initiatives;
- Adequately fund agricultural-related technical, educational and marketing services at the county level;
- Support the development of local food aggregation/distribution infrastructure that encourages local food consumption by institutions (such as schools and hospitals), restaurants, and the general public;
- Bring agriculture back to the school curriculum. Consider providing extra high school student service credit hours for cooperating county farmer-certified, agricultural-related work and study;
- Expand lobbying efforts that showcase the importance of and need for sustaining local agriculture. This could be done through the assistance and involvement of county councils, state delegates and senators, the COG Board, and both citizen and farm-friendly groups;
- Expand both farmer mentoring and land leasing opportunities; and
- Work with local and state lending institutions to make farming-related loans easier and quicker to obtain.

Literature Cited

Chase A. Robert *The Economic Contribution and Long-Term Sustainability of the Delmarva Poultry Industry.* Report prepared for the Maryland Agro-Ecology Center, Inc., Queenstown Maryland, April 2003 (http://www.agroecol.umd.edu)

Comprehensive Plan for Frederick County, MD. Chapter 05 Preserving Our Agricultural And Rural Community - Adopted April 2010. Accessed 12/5/2011.

Delmarva Soybean & Corn Production and Broiler Chicken Use. Delmarva Poultry Industry, Inc. December 2010. (http://www.dpichicken.org/faq_facts/)

Dorfman H. Jeffrey, Black L. Dawn, Newman H. David, Dangerfield W. Coleman Jr.,Flick A. Warren, *The Economic Cost of Development for Local Governments.* January, 2002.

Growth Trends to 2040: Cooperative Forecasting in the Washington Region. Accessed 12/1/11 (http://www.mwcog.org/store/item.asp?PUBLICATION_ID=397)

Hunsberger, L.K., Dill, S.P., Beale, B. 2010. Organic Vegetable Production. Maryland rural Enterprise Development Center. University of Maryland Extension. College Park, MD. http://mdredc.umd.edu.hotlistorganic.html

Maryland at a Glance; Agriculture (http://www.msa.md.gov/msa/mdmanual/01glance/economy/html/employ.html#employers)

Outlook for U.S. Agricultural Trade. United States Department of Agriculture AES-71 August 31, 2011.

Pittman Racel, Sprague Sharon,*Virginia Agricultural Statistics Bulletin, 2008, Number 84.* Published September 2009 USDA/NASS/Virginia Field Office.

Slama Jim et al. *Local Food System Assessment for Northern Virginia.* August 2010. Presented FamilyFarmed.org (http://www.ngfn.org/resources/ngfn-database/knowledge/Northern-VA-LFS-Assessment-Final-Report.pdf)

U.S. Bureau of the Census. Census of Population and Housing, 2000: Summary File 1: District of Columbia Maryland and Virginia. Via American FactFinder (December 12th 2012).

U.S. Department of Agriculture National Agricultural Statistics Service (NASS) 2002 Census of Agriculture.

U.S. Department of Agriculture National Agricultural Statistics Service (NASS) 2007 Census of Agriculture.

U.S. Food Market Estimator hosted by the Leopold Center for Sustainable Agriculture. (http://www.ctre.iastate.edu/marketsize/Default.aspx)

www.nationalcapitalfarms.org Regional Database. (www.nationalcapitalfarms.org)

Photo Credits

- Frederick County, MD Business Development and Retention Division
- Montgomery County, MD Department of Economic Development
- Montgomery County Soil Conservation District
- Prince George's County, MD (UMD Extension)
- Prince George's County, M-NCPPC
- Fauquier County, VA Department of Agricultural Development
- Loudoun County, VA Department of Economic Development
- Loudoun Soil and Water Conservation District
- Jefferson County, WV Development Authority
- Freshfarm Markets
- Piedmont Environmental Council
- Potomac Vegetable Farms
- Metropolitan Washington Council of Governments

Special Thanks

The Metropolitan Washington Council of Governments would like to thank the following members of the Regional Agricultural Workgroup for their support and insights into the workings of agriculture in their counties:

Kellie Boles
Yates Clagget
Jeremy Criss
Colby Ferguson
Reg Godin
Gary Hornbaker
Janna Howley
Hiu Newcomb
Sheppard Ogden
Ray Pickering
David Plummer
Lindsay Smith
Chris Van Vlack
John Zawitoski

Appendix 1
Regional Data on Select Crops and Animals[1,2,3]


Fauquier County, VA

[1]The crop production data and acreages are sourced from the 2007 Census of Agriculture, and the demand data was sourced from the U.S. Food Market Estimator hosted by the Leopold Center for Sustainable Agriculture.

[2]Product demand data in the Estimator is based on the USDA Food Availability Data System which is an annual estimate of the amounts of 204 food items available - demand for products was assessed with production needed values. Note: 2007 data is the latest available (http://www.ctre.iastate.edu/marketsize/Default.aspx).

[3]The tables and figures presented herein summarize regional agricultural production, as well as market demand. The agricultural products are representative of those that do well in the region and are main staples of the modern diet. Note: USDA and Leopold Center estimates for county production and demand may vary from most recent county data.

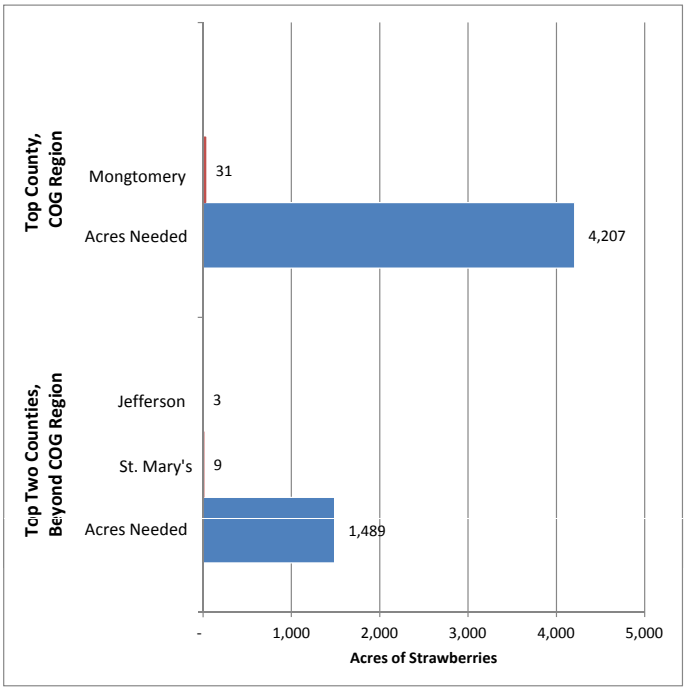
Fruits

Tables and Figures 1-3 on the following pages were included because they are representative of the fruits that are commonly grown and consumed in the Washington region. It is also worth noting that the region continues to have a relatively strong apple industry. The apple industry is especially strong in Washington County. Washington County is the leading apple producer in the region, and the state of Maryland, with over 1,235 acres harvested in 2007. Berries, while not produced at sufficiently high quantities, have seen some production growth in Loudoun (the state leader in berry production in Virginia) and Washington Counties.

Strawberries

Table and Figure 1: Production & Demand

Strawberry Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (gallons)	Acres Needed
Anne Arundel		7	754,802	472
Calvert			130,021	81
Carroll		15	249,393	156
Charles*			206,983	129
Frederick*		14	331,165	207
Howard			403,328	252
Montgomery*	31	45	1,371,812	857
Prince George's*		10	1,221,424	763
St Mary's	9	8	147,935	92
Washington		11	213,864	134
District of Columbia*			867,012	542
Arlington*			301,488	188
Clarke			21,165	13
Culpeper		1	67,386	42
Fairfax*			1,488,872	931
Fauquier		2	97,753	61
King George			33,352	21
Loudoun*		1	410,885	257
Prince William*			531,166	332
Rappahannock			10,310	6
Stafford			177,979	111
Jefferson WV	3		74,915	47
COG Region*	31	70	6,730,807	4,207
Beyond COG Region	12	44	2,382,203	1,489
Total	43	114	9,113,010	5,696

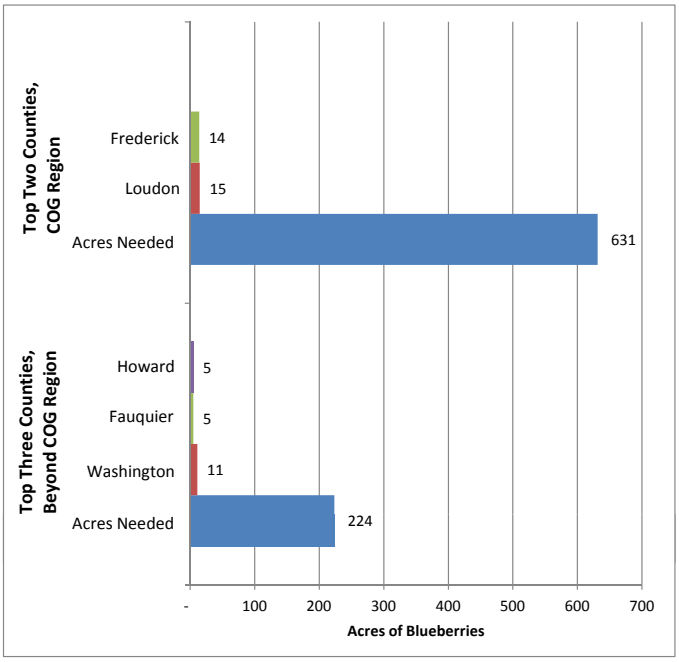


* COG Region Members

Blueberries

Table and Figure 2: Production & Demand

Blueberry Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	2		424,881	71
Calvert			73,189	12
Carroll			140,384	23
Charles*			116,512	19
Frederick*	14	16	186,414	31
Howard	5		227,035	38
Montgomery*		18	772,199	129
Prince George's*		4	687,544	115
St Mary's			83,273	14
Washington	11	9	120,385	20
District of Columbia*			488,045	81
Arlington*			169,709	28
Clarke	2		11,914	2
Culpeper			37,932	6
Fairfax*			838,092	140
Fauquier	5	5	55,025	9
King George			18,774	3
Loudoun*	15		231,289	39
Prince William*			298,995	50
Rappahannock			5,972	1
Stafford			100,151	17
Jefferson WV	1	1	42,170	7
COG Region*	29	38	3,788,799	631
Beyond COG Region	26	15	1,341,085	224
Total	55	53	5,129,884	855

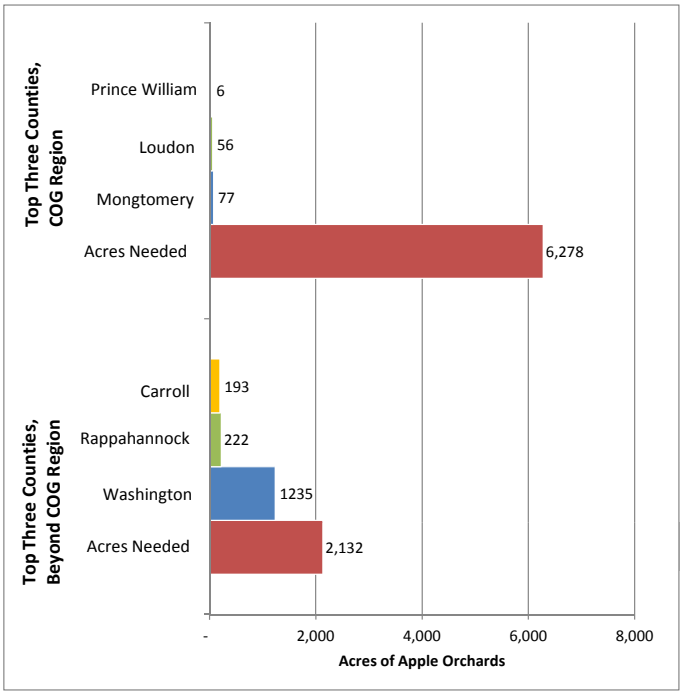


* COG Region Members

Apples

Table and Figure 3: Production & Demand

Apple Production	Acres Harvested: 2007	Acres Harvested: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	22		15,784,056	470
Calvert	1		4,461,102	133
Carroll	193	196	8,556,813	255
Charles*		13	7,101,720	211
Frederick*		97	11,362,479	338
Howard	18	31	13,838,403	412
Montgomery*	77	70	47,067,682	1,401
Prince George's*	2	3	21,907,754	652
St Mary's		31	5,075,735	151
Washington	1,235	1,354	7,337,814	218
District of Columbia*			29,747,694	885
Arlington*			10,344,228	308
Clarke		1,683	726,181	22
Culpeper	7	3	2,312,039	69
Fairfax*			51,084,054	1,520
Fauquier	119	92	3,353,955	100
King George			1,144,313	34
Loudoun*	56	49	14,097,706	420
Prince William*	6	3	18,224,617	542
Rappahannock	222	326	364,026	11
Stafford			6,104,504	182
Jefferson WV	527	677	2,570,381	76
COG Region*	141	235	210,937,934	6,278
Beyond COG Region	2,344	4,393	71,629,322	2,132
Total	2,485	4,628	282,567,256	8,410



* COG Region Members

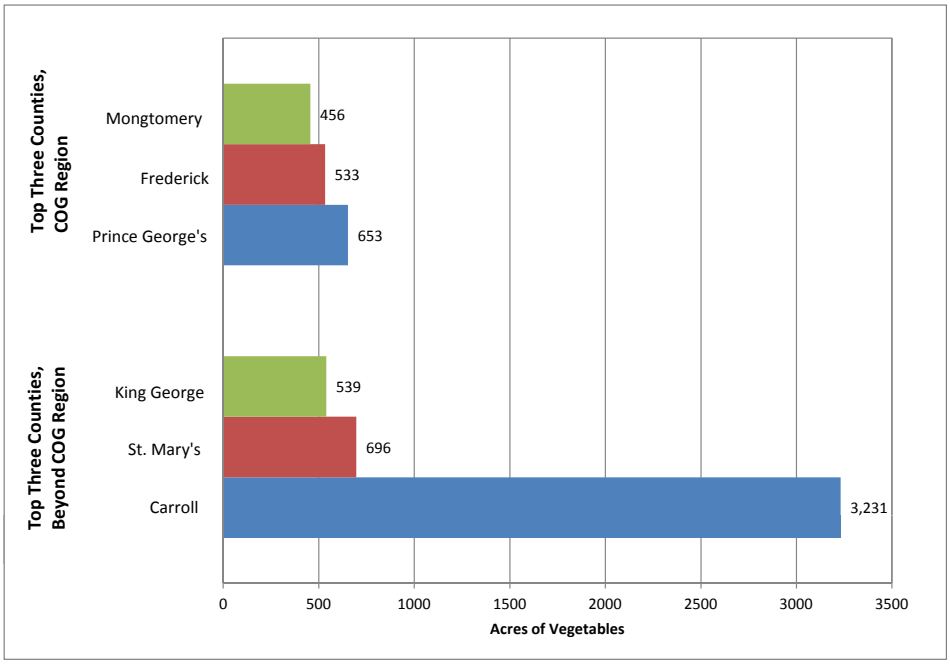
Vegetables

Tables and Figures 4-10 summarize vegetable production in the Washington region. These vegetable crops were selected because they represent staples that are commonly found in area grocery stores and farmers markets. While the region grows a wide variety of vegetables in varying quantities, the most widely grown crops are sweet corn (981 acres in 2007) and pumpkins (1,083 acres in 2007). Overall, the region grew 8,508 acres of vegetables in 2007. However, this number may be less than the true total. Many area vegetable operations are small farms with only an acre or two and might not have been captured in the agricultural census due to its voluntary nature.

Vegetables

Table and Figure 4: Total Vegetable Production (Includes Lettuce, Tomatoes, Broccoli, Sweet Corn, Asparagus, etc.)

Vegetables	Acres Grown: 2007	Acres Grown: 2002
Anne Arundel	303	401
Calvert	400	262
Carroll	3,231	3,283
Charles*	397	335
Frederick*	533	488
Howard	150	131
Montgomery*	456	986
Prince George's*	653	1,177
St Mary's	696	539
Washington	523	504
District of Columbia*		
Arlington*		
Clarke	42	25
Culpeper	44	50
Fairfax*	6	8
Fauquier	75	97
King George	534	275
Loudoun*	204	233
Prince William*	97	56
Rappahannock	44	23
Stafford	1	
Jefferson WV	120	96
COG Region*	2,346	3,283
Beyond COG Region	6,163	5,686
Total	8,509	8,969



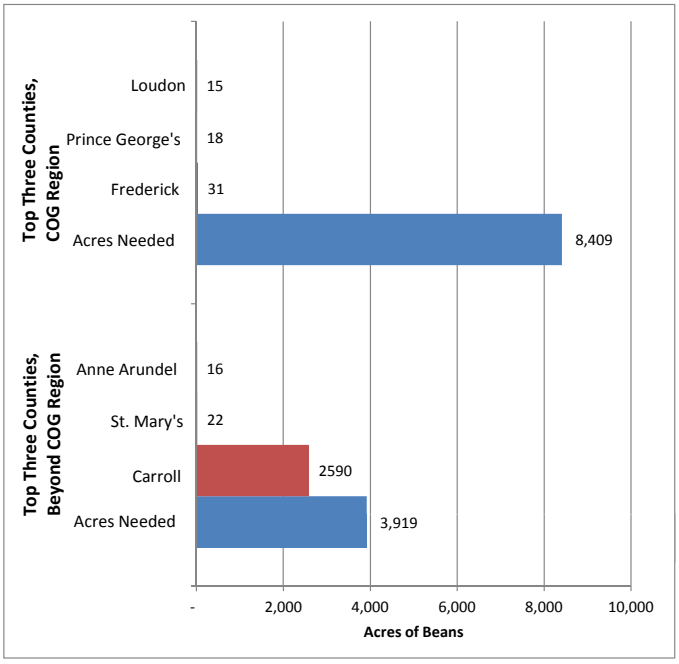
* COG Region Members

Beans

Table and Figure 5: Production & Demand

Bean^ Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	16		5,657,692	1,886
Calvert			974,587	162
Carroll	2,590	2,331	1,869,348	312
Charles*	10	5	1,551,464	259
Frederick*	31	38	2,482,285	414
Howard	4	2	3,023,182	504
Montgomery*	6	9	10,282,558	1,714
Prince George's*	18	27	9,155,303	1,526
St Mary's	24	9	1,108,862	185
Washington	7	3	1,603,043	267
District of Columbia*			6,498,777	1,083
Arlington*			2,259,833	377
Clarke	2		158,644	26
Culpeper	2	2	505,096	84
Fairfax*			11,159,987	1,860
Fauquier	8	5	732,715	122
King George	1	17	249,991	42
Loudoun*	16	11	3,079,830	513
Prince William*	6	3	3,981,409	664
Rappahannock	1	1	79,526	13
Stafford			1,333,611	222
Jefferson WV	3	5	561,534	94
COG Region*	87	93	50,451,446	8,409
Beyond COG Region	2,658	2,375	17,857,831	3,919
Total	2,745	2,468	68,309,277	12,328

^Includes Snap beans, Lima beans, and Green peas

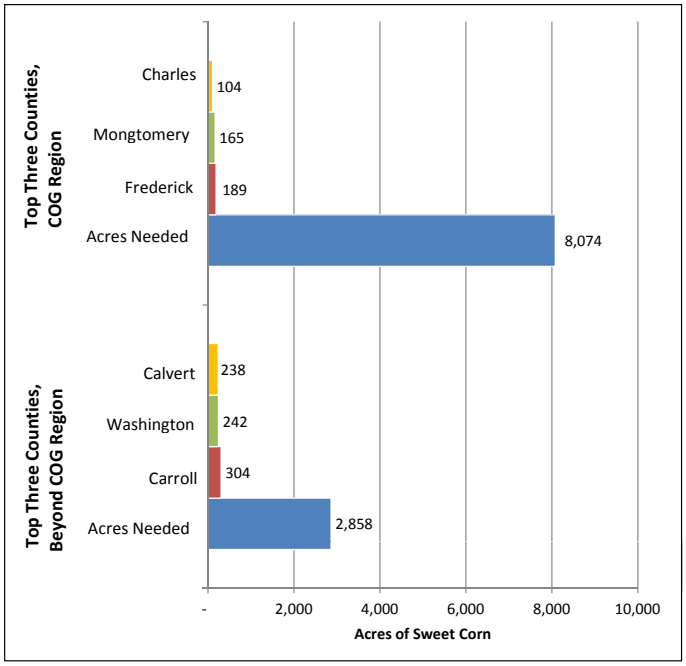


* COG Region Members

Sweet Corn

Table and Figure 6: Production & Demand

Sweet Corn	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	121	150	13,491,245	905
Calvert	238		2,323,958	156
Carroll	304	327	4,457,621	299
Charles*	104	170	3,699,599	248
Frederick*	189	173	5,919,216	397
Howard		49	7,209,034	484
Montgomery*	165	394	24,519,629	1,646
Prince George's*	88	83	21,831,596	1,465
St Mary's	152	168	2,644,174	177
Washington	242	295	3,822,591	257
District of Columbia*			15,496,885	1,040
Arlington*			5,388,764	362
Clarke		21	378,300	25
Culpeper		15	1,204,443	81
Fairfax*			26,611,935	1,786
Fauquier	12	22	1,747,223	117
King George		155	596,123	40
Loudoun*	25	37	7,344,117	493
Prince William*	30	12	9,494,006	637
Rappahannock	7	3	189,637	13
Stafford			3,180,105	213
Jefferson WV	43	31	1,339,025	90
COG Region*	601	869	120,305,747	8,074
Beyond COG Region	1,119	1,236	42,583,479	2,858
Total	1,720	2,105	162,889,226	10,932

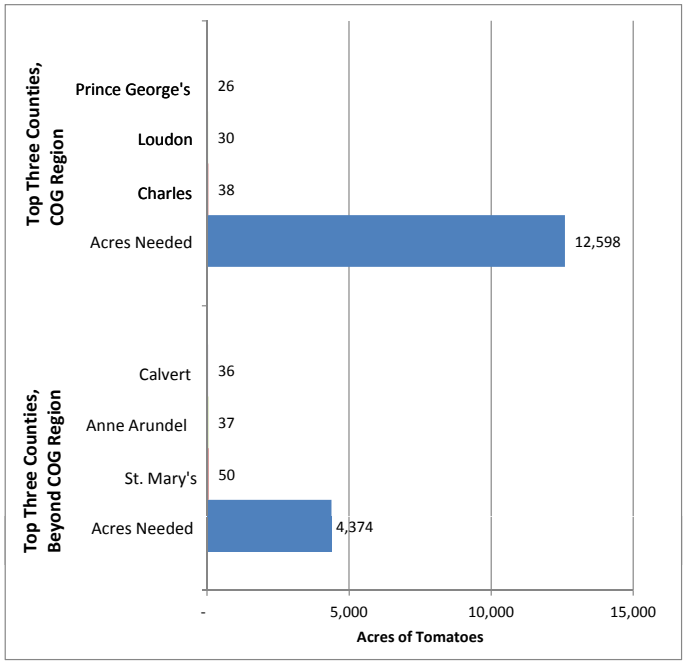


* COG Region Members

Tomatoes

Table and Figure 7: Production & Demand

Tomato Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	37	42	43,230,535	1,413
Calvert	36	30	7,446,837	243
Carroll	31	30	14,283,733	467
Charles*	38	24	11,854,773	387
Frederick*	19	11	18,967,180	620
Howard	13	6	23,100,195	755
Montgomery*	21	51	78,569,226	2,568
Prince George's*	26	23	69,955,853	2,286
St Mary's	50	51	8,472,832	277
Washington	33	14	12,248,879	400
District of Columbia*			49,657,286	1,623
Arlington*			17,267,431	564
Clarke	5		1,212,201	40
Culpeper	6	20	3,859,444	126
Fairfax*	1		85,273,684	2,787
Fauquier	9	18	5,598,697	183
King George	3	19	1,910,181	62
Loudoun*	30	27	23,533,045	769
Prince William*	12	3	30,422,022	994
Rappahannock	8	5	607,662	20
Stafford			10,190,138	333
Jefferson WV	13	10	1,674,586	55
COG Region*	147	139	385,500,500	12,598
Beyond COG Region	244	245	133,835,920	4,374
Total	391	384	519,336,420	16,972

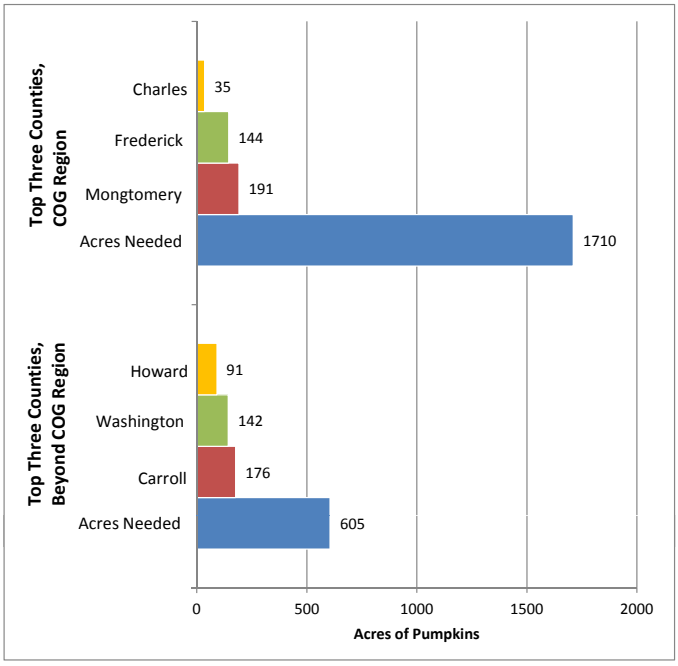


* COG Region Members

Pumpkins

Table and Figure 8: Production & Demand

Pumpkin Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	25	58	2,454,961	192
Calvert	5	40	422,889	33
Carroll	176	118	811,140	63
Charles*	35	30	673,205	53
Frederick*	144	138	1,077,102	84
Howard	91	31	1,311,806	102
Montgomery*	191	449	4,461,763	349
Prince George's*	4	39	3,972,630	310
St Mary's	86	83	481,152	38
Washington	142	132	695,585	54
District of Columbia*			2,819,921	220
Arlington*			980,557	77
Clarke			68,838	5
Culpeper	22		219,169	17
Fairfax*			4,842,493	378
Fauquier	13	28	317,937	25
King George			108,475	8
Loudoun*		47	1,336,387	104
Prince William*	20		1,727,596	135
Rappahannock		22	34,508	3
Stafford		4	578,674	45
Jefferson WV	27	24	243,658	19
COG Region*	394	703	21,891,654	1,710
Beyond COG Region	587	540	7,748,792	605
Total	981	1,243	29,640,446	2,316

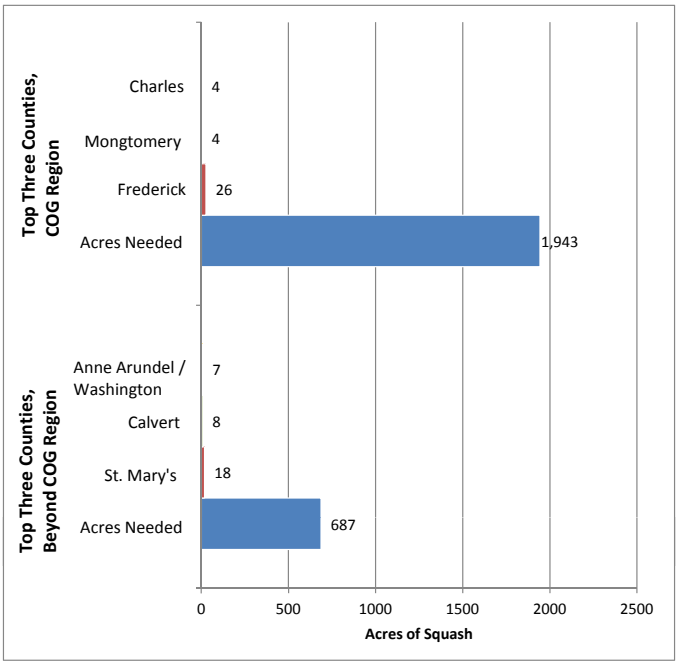


* COG Region Members

Squash

Table and Figure 9: Production & Demand

Squash Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	7	19	2,571,011	218
Calvert	8	1	442,879	38
Carroll	2	8	849,484	72
Charles*	4	22	705,028	60
Frederick*	26	17	1,128,018	96
Howard	4	3	1,373,817	116
Montgomery*	4	14	4,672,678	396
Prince George's*			4,160,423	353
St Mary's	18	29	503,897	43
Washington	7	1	728,467	62
District of Columbia*			2,953,224	250
Arlington*			1,026,931	87
Clarke	3		72,092	6
Culpeper			229,529	19
Fairfax*		3	5,071,406	430
Fauquier	2		322,966	27
King George	1	12	113,603	10
Loudoun*	2	5	1,399,560	119
Prince William*		1	1,809,262	153
Rappahannock			36,139	3
Stafford			606,029	51
Jefferson WV	5	7	255,176	22
COG Region*	36	62	22,926,530	1,943
Beyond COG Region	57	80	8,105,089	687
Total	93	142	31,031,619	2,630

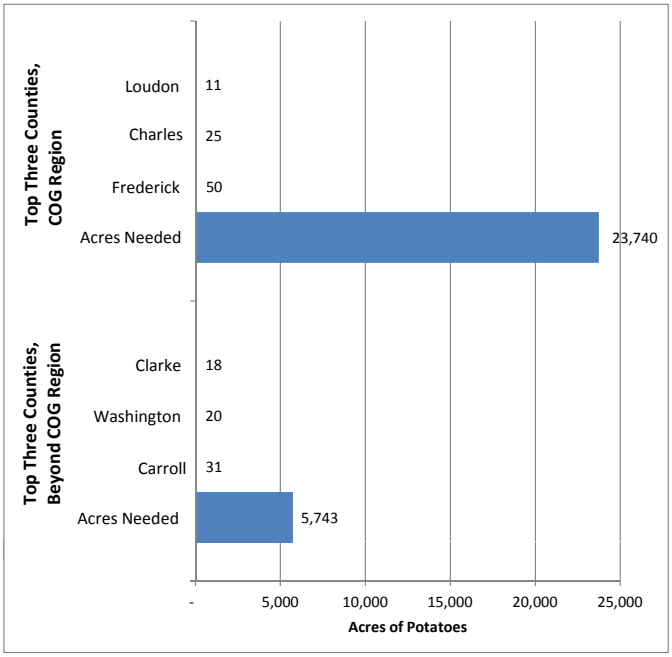


* COG Region Members

Potatoes

Table and Production 10: Production & Demand

Potato Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	8	2	53,245	3
Calvert		21	9,171,922	459
Carroll	31	30	17,592,607	880
Charles*	25	4	14,600,970	730
Frederick*	50	65	23,360,991	1,168
Howard	2		28,451,432	1,423
Montgomery*	7	3	96,770,048	4,839
Prince George's*	10	5	86,161,359	4,308
St Mary's		14	10,435,591	522
Washington	20	10	15,086,373	754
District of Columbia*			61,160,561	3,058
Arlington*			21,267,489	1,063
Clarke	18		1,493,012	75
Culpeper	3	2	4,753,497	238
Fairfax*			105,027,616	5,251
Fauquier			6,895,653	345
King George	7	1	2,352,681	118
Loudoun*	11		28,984,553	1,449
Prince William*	2		37,469,384	1,873
Rappahannock	3		748,429	37
Stafford			12,550,717	628
Jefferson WV	8	7	5,284,644	264
COG Region*	105	77	474,802,971	23,740
Beyond COG Region	100	87	114,869,803	5,743
Total	205	164	589,672,774	29,484



* COG Region Members

Grains

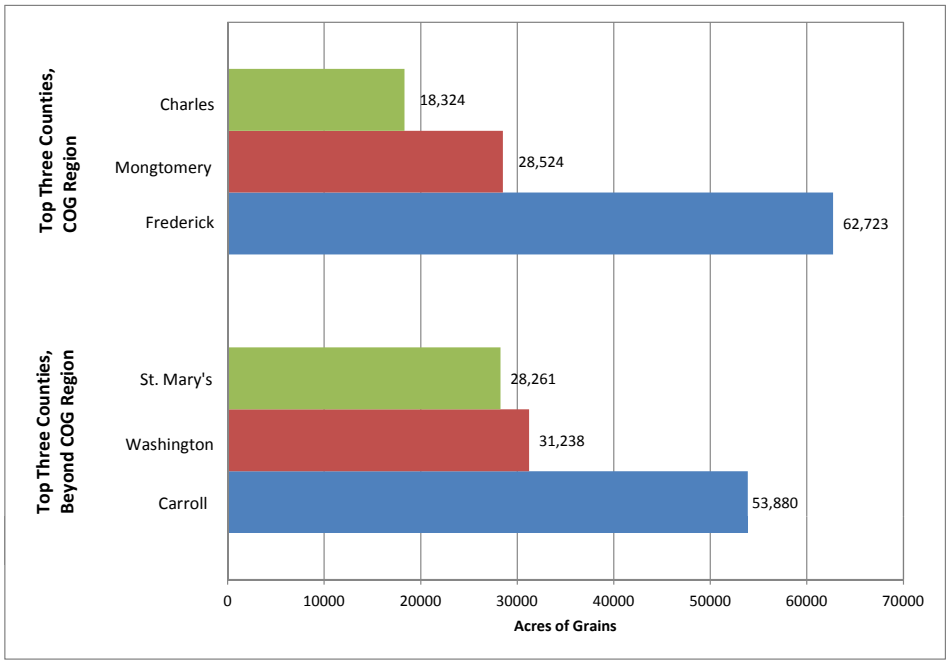
Grain crop production makes up the overwhelming majority of agricultural activity in the region. In 2007, a total of 333,263 acres of grains were harvested (corn, soybeans and wheat), making grain the number one use of planted agricultural land. Most of the grain crop in the Washington region is used in the production of animal feed. As mentioned earlier, the overwhelming majority of the grain is used by the Eastern Shore poultry industry.

Grains

Table and Figure 11: Total Grain Production

Grains^	Acres Grown: 2007	Acres Grown: 2002
Anne Arundel	8,856	1429
Calvert	8,998	11200
Carroll	53,880	58,719
Charles*	18,324	18753
Frederick*	62,723	55711
Howard	9,105	13338
Montgomery*	28,524	29632
Prince George's*	8,314	11631
St Mary's	28,261	30799
Washington	31,238	28990
District of Columbia*		
Arlington*		
Clarke	5,619	5827
Culpeper	12,725	15768
Fairfax*	730	327
Fauquier	13,357	17580
King George	7,586	8033
Loudoun*	9,523	13551
Prince William*	2,914	3526
Rappahannock	571	686
Stafford	2,902	2746
Jefferson WV	19,113	21638
COG Region*	131,052	133,131
Beyond COG Region	202,211	216,753
Total	333,263	349,884

^Corn, Soybeans, and Wheat

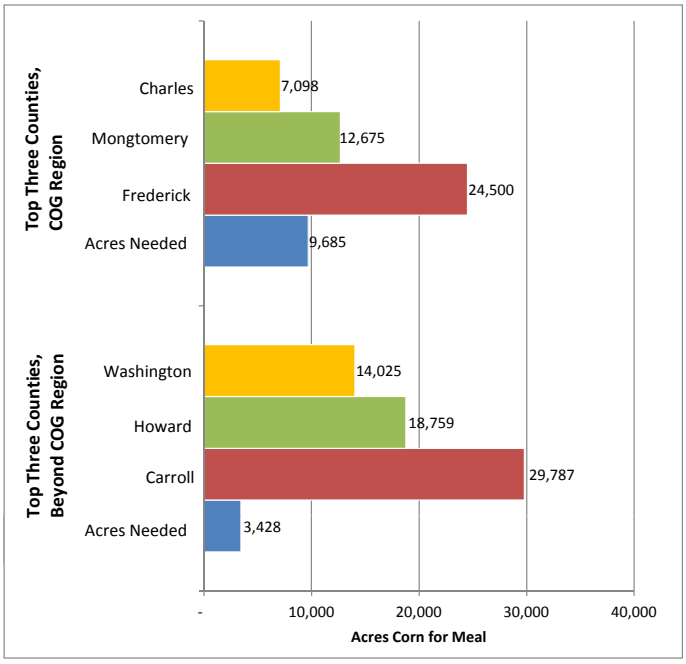


* COG Region Members

Cornmeal

Table and Figure 12: Production & Demand

Corn Meal Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	4,021	5,943	9,730,926	1,086
Calvert	4,685	5,253	1,676,237	187
Carroll	29,787	30,710	3,215,180	359
Charles*	7,098	5,021	2,668,436	298
Frederick*	24,500	22,101	4,269,395	476
Howard	4,898	7,162	5,199,711	580
Montgomery*	12,675	11,121	17,685,447	1,974
Prince George's*	4,731	4,811	15,746,630	1,757
St Mary's	10,351	9,093	1,907,182	213
Washington	14,025	14,014	2,757,147	308
District of Columbia*			11,177,548	1,247
Arlington*			3,886,792	434
Clarke	3,115	3582	272,859	30
Culpeper	6,026	8,490	868,737	97
Fairfax*	326	255	19,194,579	2,142
Fauquier	8,595	9,782	1,260,232	141
King George	3,283	2,841	429,970	48
Loudoun*	5,395	6,031	5,297,143	591
Prince William*	1,601	1,448	6,847,809	764
Rappahannock	571	318	136,781	15
Stafford	1,420	1,257	2,293,737	256
Jefferson WV	7,198	9,660	965,808	108
COG Region*	56,326	50,788	86,773,779	9,685
Beyond COG Region	97,975	108,105	30,714,507	3,428
Total	154,301	158,893	117,488,286	13,113

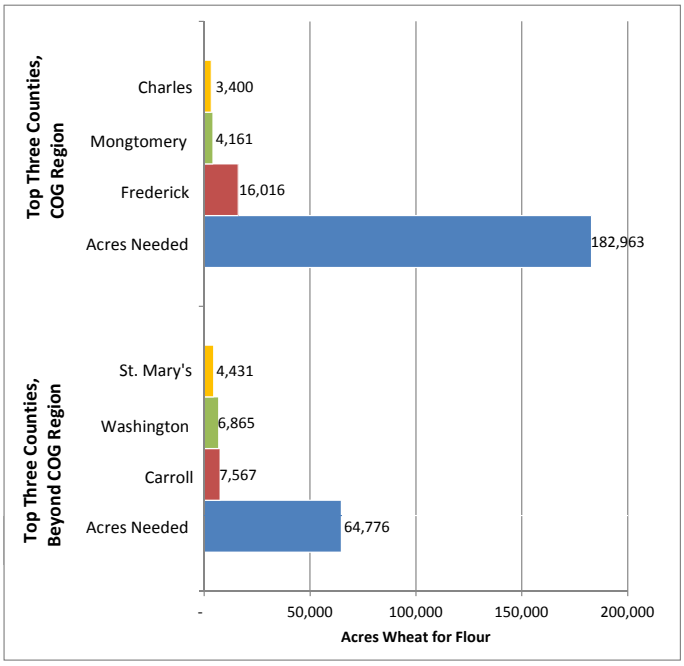


* COG Region Members

Wheat (Flour)

Table and Figure 13: Production & Demand

Wheat Production	Acres Grown: 2007	Acres Grown: 2002	Production Needed (lbs)	Acres Needed
Anne Arundel	1,139	1,818	62,907,234	20,518
Calvert	1,894	1,756	10,836,321	3,534
Carroll	7,567	7,583	20,785,081	6,779
Charles*	3,400	2,972	17,250,561	5,626
Frederick*	16,016	11,908	27,600,234	9,002
Howard	1,531	1,942	33,614,421	10,964
Montgomery*	4,161	4,717	114,330,595	37,290
Prince George's*	825	1,587	101,796,781	33,202
St Mary's	4,431	5,268	12,329,304	4,021
Washington	6,865	5,044	17,866,771	5,827
District of Columbia*			72,259,170	23,568
Arlington*			25,126,832	8,195
Clarke	474	715	1,763,944	575
Culpeper	1,420	1,246	5,616,099	1,832
Fairfax*			124,086,637	40,472
Fauquier	1,143	1,562	8,146,985	2,657
King George	930	1,185	2,779,615	907
Loudoun*	1,281	2,536	34,244,286	11,169
Prince William*		671	44,268,832	14,439
Rappahannock		63	884,244	288
Stafford		156	14,828,255	4,836
Jefferson WV	3,985	3797	6,243,631	2,036
COG Region*	25,683	24,391	560,963,928	182,963
Beyond COG Region	31,379	32,135	198,601,905	64,776
Total	57,062	56,526	759,565,833	247,738



* COG Region Members

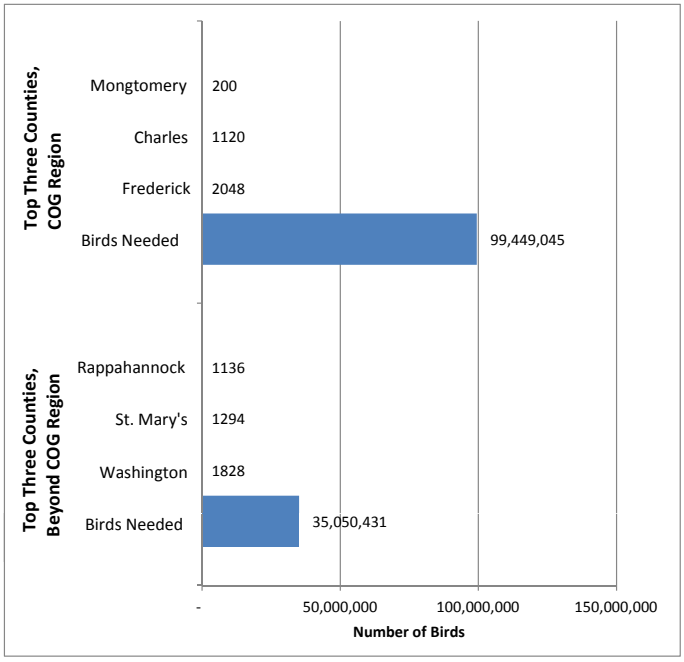
Meats and Dairy

Tables and Figures 14-17 summarize meat and dairy production in the region. The region still has a relatively strong cattle and dairy industry. Washington and Frederick counties lead the Washington region and Maryland in their milk production. Fauquier in Virginia is the region's top beef producer and ranks high in the state. It should be noted that poultry in the region is limited because of the region's proximity to the Eastern Shore, which is one of the nation's top chicken producing areas.

Chickens

Table and Figure 14: Production & Demand

Chicken Production	Birds Sold: 07	Birds Sold: 02	Production Needed (lbs)	Birds Needed
Anne Arundel		75	52,191,748	11,104,627
Calvert	304	600	8,990,485	1,912,869
Carroll	513	63	17,244,594	3,669,063
Charles*	1,120		14,312,136	3,045,135
Frederick*	2,048	75	22,898,868	4,872,100
Howard		105	27,888,611	5,933,747
Montgomery*	200		94,855,762	20,182,077
Prince George's*			84,456,931	17,969,560
St Mary's	1,294	1,478	10,229,156	2,176,416
Washington	1,828	4,312	14,787,937	3,146,370
District of Columbia*			59,950,694	12,755,467
Arlington*			20,846,780	4,435,485
Clarke			1,463,477	311,378
Culpeper			4,659,464	991,375
Fairfax*			104,949,980	22,329,783
Fauquier	706	492	6,759,245	1,438,137
King George			2,306,141	490,668
Loudoun*	530		28,411,187	6,044,933
Prince William*		105	36,728,172	7,814,505
Rappahannock	1,136	59	733,624	156,090
Stafford			12,302,441	2,617,541
Jefferson WV		825	5,180,104	1,102,150
COG Region*	3,898	180	467,410,510	99,449,045
Beyond COG Region	5,781	8,009	164,737,027	35,050,431
Total	9,679	8,189	632,147,537	134,499,476

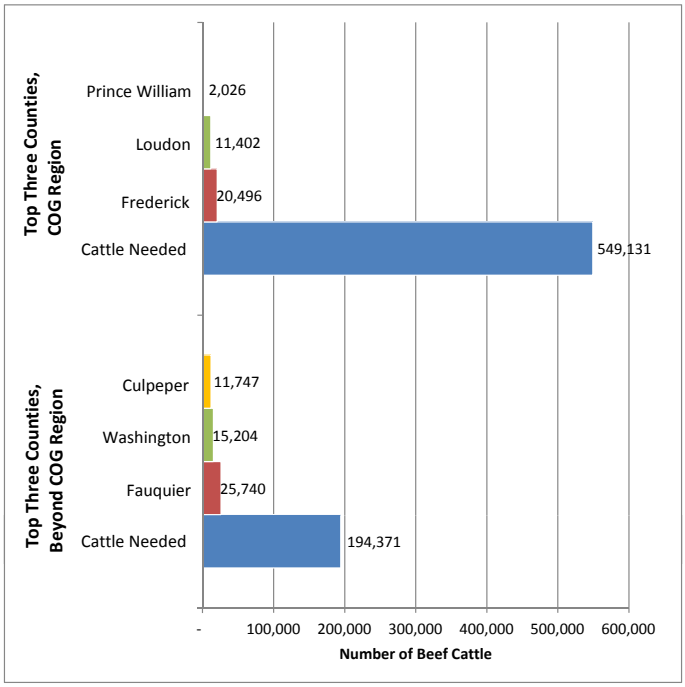


* COG Region Members

Beef Cattle

Table and Figure 15: Production & Demand

Beef Production	Cattle & Calves Sold: 2007	Cattle & Calves Sold: 2002	Production Needed (lbs)	Number of Cattle Needed
Anne Arundel	557	1,103	48,032,581	61,580
Calvert	508	416	8,274,032	10,608
Carroll	9,084	11,173	15,870,370	20,347
Charles*	1,223	1,320	13,171,600	16,887
Frederick*	20,496	21,442	21,074,054	27,018
Howard	1,289	1,650	25,666,164	32,905
Montgomery*	1,995	2,726	87,296,694	111,919
Prince George's*	824	854	77,726,548	99,649
St Mary's	3,033	2,205	9,413,994	12,069
Washington	15,204	16,323	13,609,485	17,448
District of Columbia*			55,173,216	70,735
Arlington*			19,185,497	24,597
Clarke	8,444	8,260	1,346,853	1,727
Culpeper	11,747	18,473	4,288,151	5,498
Fairfax*		595	94,745,883	121,469
Fauquier	25,740	36,462	6,220,600	7,975
King George	1,036	1,105	2,122,364	2,721
Loudoun*	11,402	12,525	26,147,095	33,522
Prince William*	2,026	3,351	33,801,299	43,335
Rappahannock	5,794	8,309	675,161	866
Stafford	1,073	1,705	11,322,058	14,515
Jefferson WV	5,713	6,153	4,767,301	6,112
COG Region*	37,966	42,813	428,321,886	549,131
Beyond COG Region	89,222	113,337	151,609,114	194,371
Total	127,188	156,150	579,931,000	743,501

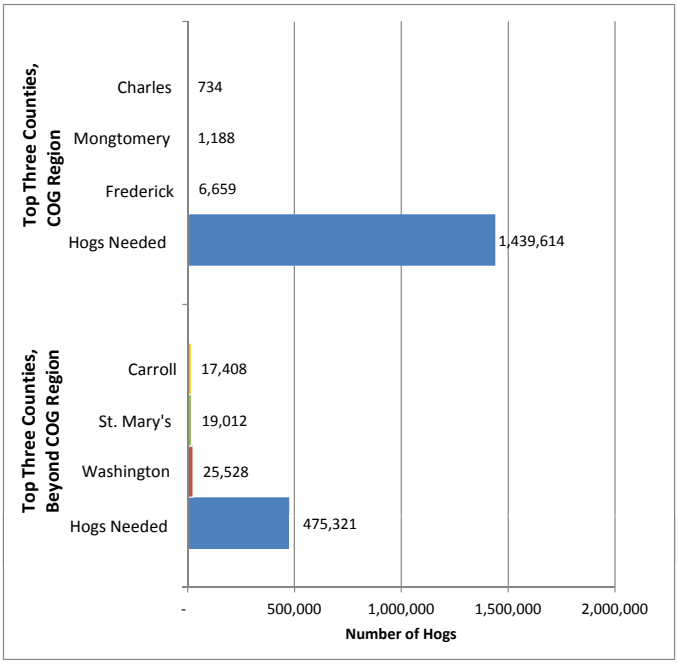


* COG Region Members

Pigs

Table and Figure 16: Production & Demand

Pork Production	Pigs Sold: 2007	Pigs Sold: 2002	Production Needed (lbs)	Pigs Needed
Anne Arundel	50	224	32,287,967	161,440
Calvert		47	5,561,884	27,809
Carroll	17,408	15165	10,668,217	53,341
Charles*	734	829	8,854,078	44,270
Frederick*	6,659	12493	14,166,784	70,834
Howard	890	303	17,253,044	86,265
Montgomery*	1,188	208	58,681,684	293,408
Prince George's*			52,248,539	261,243
St Mary's	19,012	1745	6,328,178	31,641
Washington	25,528	28834	9,148,429	45,742
District of Columbia*			37,087,971	185,440
Arlington*			12,896,677	64,483
Clarke	185	220	905,367	4,527
Culpeper	497	327	2,882,537	14,413
Fairfax*	233	340	63,689,101	318,446
Fauquier	326	617	4,181,547	20,908
King George	20		1,426,674	7,133
Loudoun*	115	141	17,576,331	87,882
Prince William*	35	18	22,721,561	113,608
Rappahannock		55	453,850	2,269
Stafford			761,797	3,809
Jefferson WV	451		3,204,626	16,023
COG Region*	8,964	14,029	287,922,726	1,439,614
Beyond COG Region	64,367	47,537	95,064,117	475,321
Total	73,331	61,566	382,986,843	1,914,934

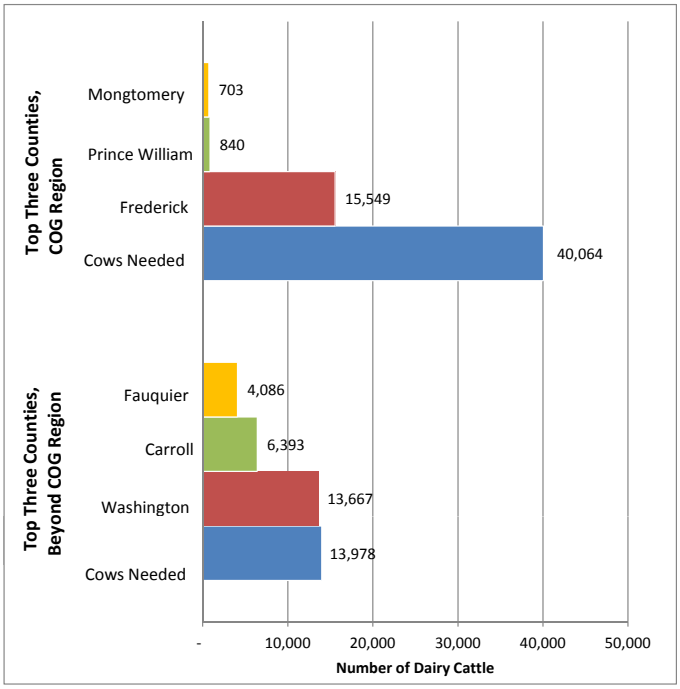


* COG Region Members

Dairy

Table and Figure 17: Production & Demand

Dairy (Milk) Production	Cows and heifers that calved: 2007	Cows and heifers that calved: 2002	Production Needed (lbs)	Cows Needed
Anne Arundel			92,998,753	4,429
Calvert			16,019,847	763
Carroll	6,393	8,731	30,727,572	1,463
Charles*	290	157	25,502,323	1,214
Frederick*	15,549	22,309	40,802,737	1,943
Howard	571	897	49,693,795	2,366
Montgomery*	703	1,546	169,020,349	8,049
Prince George's*		144	150,491,017	7,166
St Mary's	503	352	18,226,996	868
Washington	13,667	16,200	26,350,137	1,255
District of Columbia*			106,824,163	5,087
Arlington*			37,146,188	1,769
Clarke	1,860	1,419	2,607,722	124
Culpeper	2,249	3,064	8,302,546	395
Fairfax*		10	183,443,169	8,735
Fauquier	4,086	5,245	12,044,075	574
King George			4,109,236	196
Loudoun*	214	443	50,624,955	2,411
Prince William*	840	1,325	65,444,717	3,116
Rappahannock			1,307,220	62
Stafford			21,921,314	1,044
Jefferson WV	2,260	2,831	9,230,256	440
COG Region*	17,596	31,179	841,343,693	40,064
Beyond COG Region	31,589	38,739	293,539,469	13,978
Total	49,185	69,918	1,134,883,162	54,042



* COG Region Members

NATIONAL CAPITAL FARMS.ORG
VA · DC · MD WV