Small-Scale and Niche Market Pork Production Bulletin No. 18
Tidewater Agricultural Research and Extension Center, Suffolk, VA

United States Department of Agriculture 2017 Census of Agriculture: A Snapshot of Swine Production in Virginia

Mark J. Estienne, Ph.D.[1]
Professor and Swine Research Physiologist

INTRODUCTION

The National Agricultural Statistics Service (**NASS**) of the U.S. Department of Agriculture (**USDA**) conducts a *Census of Agriculture* every five years. The census is a complete count of farms and ranches in every county of every state in the U.S. Other information gathered during a census includes, but is not limited to, land use and ownership, operator characteristics, production practices, income and expenditures, and market value of agricultural products. By comparing data to earlier censuses, trends and new developments in the agricultural sector of the Virginia and U.S. economies can be measured.

Information collected in the Census of Agriculture is used by entities that provide services to farmers, including federal, state and local governments, and agribusinesses. Indeed, Census data are used when making decisions that affect rural communities such as community planning, location of sites for new stores or companies, availability of operating loans and other funding, location and staffing of USDA Service Centers (single locations where customers can access the services provided by the Farm Service Agency [**FSA]**, Natural Resources Conservation Service [**NRCS**], and the Rural Development agencies), and farm programs and policies. Farmers and ranchers themselves use Census data to help make decisions about future directions of their operations.

Release of results of the 2017 Census of Agriculture began in April of this year. The objective of this paper is to provide a brief summary of Census data reflective of swine production in Virginia.

GENERAL COMMENTS ABOUT THE CENSUS OF AGRICULTURE

For purposes of the Census of Agriculture, a farm was defined as: *any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year*. This definition of a farm has been in effect since 1974. In late 2017, Census questionnaires were mailed to over 3 million known and potential U.S. farmers and ranchers. The response rate was 71.5%, a decrease when compared with the 2012 Census response rate of 74.5%. All tabulated data were

[1] Contact Information: Tidewater Agricultural Research and Extension Center, 6321 Holland Road, Suffolk, VA 23437; 757-807-6551; mestienn@vt.edu

subjected to an extensive disclosure review prior to publication. Any tabulated item (at either the county or state level) that identified data reported by an individual respondent or allowed a respondent's data to be accurately estimated or derived was "suppressed" and coded with a "D". For example, if there was only one pig farm in a particular county in Virginia, then data such as number of hogs and pigs sold, or the value of hogs and pigs sold, were not reported. A "D" would appear for those items on the appropriate line and in the appropriate column of the table so specifics of an individual's operation were not disclosed. In contrast, the actual number of farms reporting an item is not considered confidential information and is provided even though other information is withheld.

SWINE PRODUCTION IN THE SOUTH ATLANTIC REGION

Table 1 contains swine production data for the U.S. and for states within the South Atlantic region including Delaware, Georgia, Florida, Maryland, North Carolina, South Carolina, Virginia, and West Virginia. Of the U.S. total for 2017, these states accounted for approximately 14% of the farms with hogs and pigs, 13% of the December 31 inventory, and 16% of the hogs and pigs sold. North Carolina remained the dominant pork producer in the region, accounting for 12.3% of the U.S. total hog and pig inventory and 15.2% of the nation's hogs and pigs sold.

With the exception of Delaware, the number of farms with hogs and pigs increased from 2012 to 2017 in all of the states in the region. In contrast hog and pig inventory increased in Delaware, Florida and Virginia, with all other states recording a decrease. All states had an increase in the number of hogs and pigs sold except Georgia and South Carolina which had decreases of 17.6% and 29.3%, respectively.

Table 1. Pork production in states of the South Atlantic region and the United States for 2012 and 2017

State	Hogs and pigs				Hogs and pigs sold					
	Farms[1]		Inventory[2]		Farms[1]		Number		Value ($1,000)	
	2012	2017[3]	2012	2017[3]	2012	2017[3]	2012	2017[3]	2012	2017[3]
Delaware	59	55	5,891	5,980	60	50	23,422	56,154	1,427	2,712
Florida	1,642	1,810	14,915	15,567	1,104	1,224	19,006	38,561	2,158	3,989
Georgia	866	1,091	153,733	81,197	600	811	696,608	573,727	56,386	53,265
Maryland	333	562	19,869	18,379	340	509	D[4]	64,614	D[4]	7,250
North Carolina	2,217	2,426	8,901,434	8,899,459	1,833	2,145	34,456,613	35,800,173	2,873,988	3,216,902
South Carolina	838	1,005	224,076	183,069	571	735	758,876	536,221	93,527	68,599
Virginia	1,265	1,461	239,899	249,231	919	1,244	559,658	664,342	67,702	96,223
West Virginia	725	892	5,873	5,314	624	922	8,712	10,467	D[4]	1,316
Region total	7,945	9,302	9,565,690	9,458,196	6051	7,640	36,522,895	37,744,259	3,095,188	3,450,256
U.S. Total	63,246	66,439	66,026,785	72,381,007	55,882	64,871	199,115,305	235,282,860	22,492,611	26,266,765
Region as percentage of U.S.	12.6	14.0	14.5	13.1	10.8	11.8	18.3	16.0	13.8	13.1

[1]Farm defined as any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year.

[2]Data as per December 31 of census year.

[3]For 2017, values appearing in green represent an increase, and values appearing in red a decrease, compared to 2012.

[4] Any tabulated item that identifies data reported by a respondent or allows a respondent's data to be accurately estimated or derived was suppressed and coded with a "D".

SWINE PRODUCTION IN VIRGINIA AND INDUSTRY CHANGES

When compared with all other states, Virginia ranks 20th in the number of farms selling hogs and pigs and in total swine inventory, and 23rd in number of hogs and pigs sold. Within Virginia, the sale of hogs and pigs ranks 9th among all agricultural products sold with 2.4% of the Commonwealth's total. Shown in Figure 1 are the number of farms with hogs and pigs and the December 31 hog and pig inventory for Virginia for each Census of Agriculture from 1987 to 2017. There was a dramatic, 77% decrease in the number of swine farms between 1987 and 2002, reflective of an exodus of independent farmers from the business, and a change in industry structure toward consolidation and larger, *vertically-integrated* production. Vertical integration occurs when various components of the supply chain of a company is owned by that company. An obvious example is Smithfield Foods, Inc., which in the Commonwealth raises pigs in company-owned farms and maintains contractual arrangements with growers, as well as operates a large feed mill and a harvest facility. Nevertheless, the Virginia pork industry remains diverse having both large, corporate-owned farms and contract growers, as well as independent small-scale and niche market pig farmers. Appearing in Table 2 are the types of farms in Virginia selling hogs and pigs as documented in the 2017 Census.

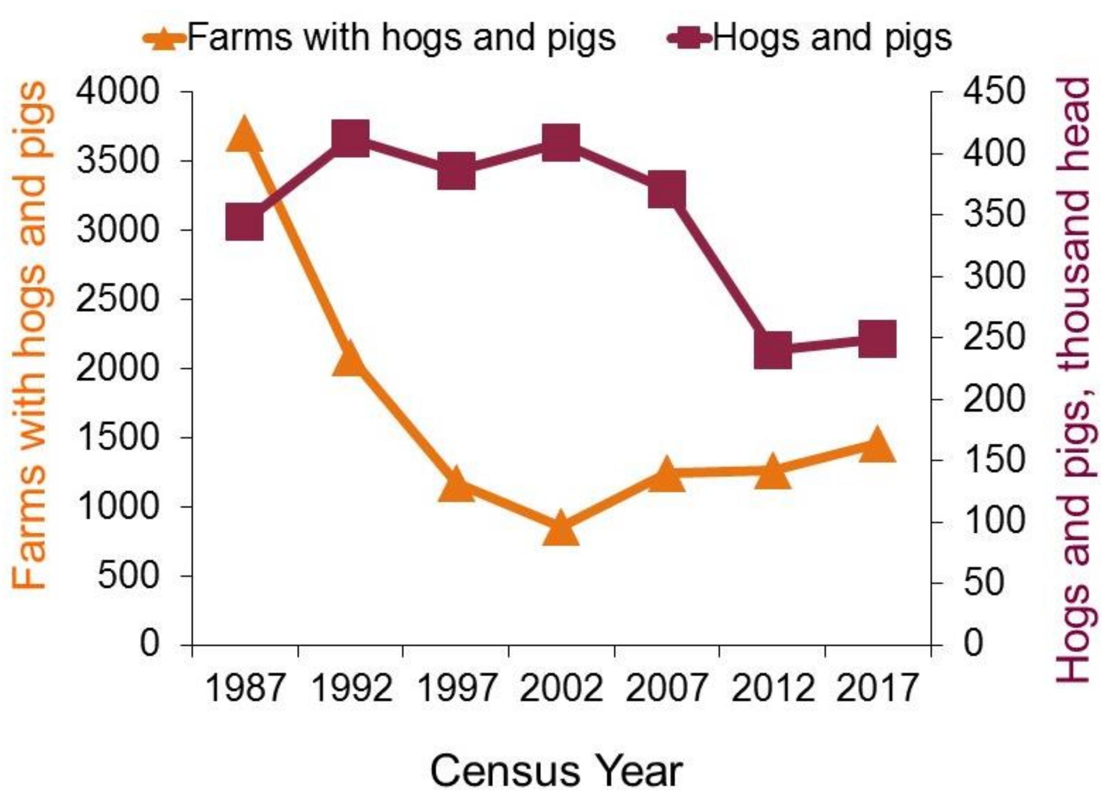

Figure 1. Number of farms in Virginia with hogs and pigs and the number of hogs and pigs on December 31 of Census years from 1987 to 2017. Between 1987 and 2002, the number of pig farms in Virginia decreased by 77%. Since 2002, the number of farms with hogs and pigs has been modestly increasing.

Table 2. Type and number of farms in Virginia selling hogs and pigs according to the 2017 Census of Agriculture.

Farms:		**Number**
Ownership		
Independent		1,205
Integrator		6
Contract grower		33
	Total:	1,244
Type		
Farrow-to-wean[1]		143
Farrow-to-feeder[2]		117
Farrow-to-finish[3]		417
Nursery[4]		9
Finisher[5]		415
Other		143
	Total:	1,244

[1]Piglets are born and reared up to weaning, then moved to nursery or finisher operations.
[2]Piglets are born and weaned, reared through the nursery phase of production, then moved at body weights of 30 to 60 pounds to finisher operations.
[3]Piglets are born and reared through finishing and then moved to slaughter at body weights of 250 to 260 pounds.
[4]Weaned pigs are acquired, reared for 5 to 7 weeks, and moved at body weights of 30 to 60 pounds to finisher operations.
[5]Weaned pigs or feeders are acquired and reared through finishing and then moved to slaughter at body weights of 250 to 260 pounds.

An interesting aspect of the data contained in Figure 1 is that after hitting a low in 2002, the number of farms in Virginia with hogs and pigs increased by 45% from 2002 to 2007, by 2% from 2007 to 2012, and by 15% from 2012 to 2017. Data reported from the censuses indicates that the overall increase in the number of farms in Virginia with hogs and pigs is due to an increase in the number of the smallest operations. As shown in Figure 2, the number of operations with 1 to 24 head increased from 2002 to 2007 by 55%, from 2007 to 2012 by 2%, and from 2012 to 2017 by 26%. The other six size categories have shown overall decreases from 2002 to 2012. The increases in the number of the smallest size operations likely represents an increasing number of small-scale and niche market pig farmers who produce pork for consumers who prefer meat from hogs reared locally in less-intensive systems.

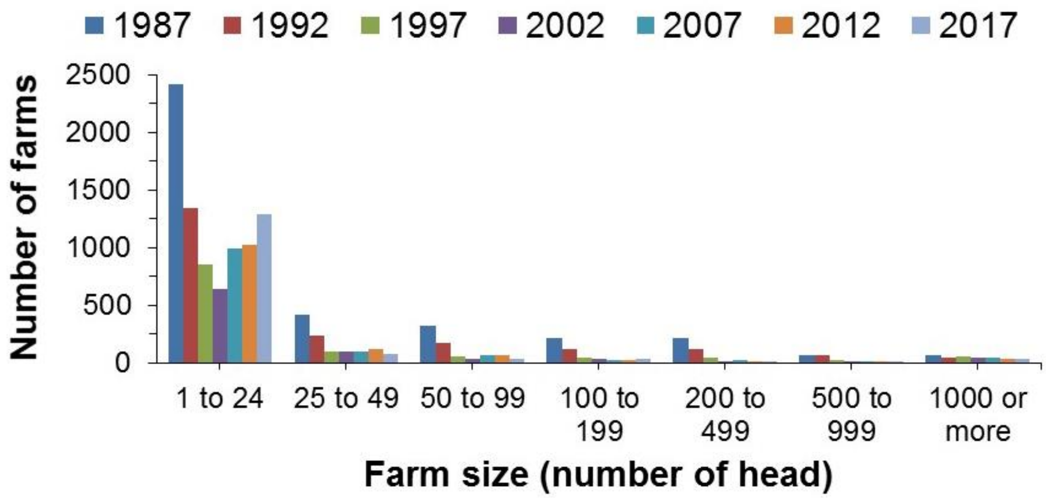

Figure 2. Number of various size farms in Virginia with hogs and pigs for Census of Agriculture years from 1987 to 2017.

WHAT ARE AREAS OF VIRGINIA WITH THE MOST HOG AND PIG FARMS?

Historically, the vast majority of hogs in Virginia were produced in the coastal plains region of the southeast corner of the state. Many large production units remain there, although for some counties, numbers of hogs and pigs were not reported in the 2017 Census of Agriculture for reasons described above. The latest census reveals that farms with hogs and pigs are distributed throughout the state. Table 3 contains the leading counties in Virginia in terms of farms selling hogs and pigs, and the number of animals sold.

Table 3. Leading counties in Virginia for farms selling hogs and pigs and hogs and pigs sold.

Farms selling hogs and pigs[1]			Hogs and pigs sold[2]		
Rank	**County**	**Number**	**Rank**	**County**	**Number**
1	Rockingham	72	1	Isle of Wight	126,067
2	Loudon	63	2	Southampton	68,822
3	Bedford	60	3	Buckingham	64,071
4	Augusta	47	4	Charlotte	53,937
5	Halifax	39	5	Halifax	52,200
5	Franklin	37	6	Suffolk (City)	2,508
7	Dinwiddie	36	7	Augusta	1,649
8	Albemarle	33	8	Rockingham	1,218
9	Frederick	30	9	Montgomery	1,115
10	Fauquier	29	10	Hanover	1,085

[1]Farm defined as any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year.
[2]Some counties from which a large number of hogs and pigs may be sold may not appear in this list because reporting so may disclose information about the operations of an individual farm.

CONCLUDING COMMENTS

Viewing past Census of Agriculture data emphasizes the changes that have occurred in the structure of the swine industry in Virginia. It has basically evolved into two production entities: 1) Vertically integrated companies, such as Smithfield Foods, Inc. that control their own hog production and supply through company-owned farms or contractual arrangements, and 2) Small-scale and niche market farms, the number of which is modestly growing. With regard to hog production, it is perhaps naïve to think that there ever will be an increase in the number of smaller-size hog operations to levels that can supply the total demand for pork both domestically and internationally. Indeed, the vast majority of pork consumed by citizens in Virginia and the U.S. will continue to be produced by large corporate-type entities. However, there is an increasing demand for pork by typically, but not necessarily, higher-income consumers that prefer their meat to be from hogs raised locally in less-intensive systems. With that in mind it is noted that major population centers in Northern Virginia, the greater Richmond area, and Hampton Roads (Norfolk, Virginia Beach, Chesapeake, etc.) offer large potential markets for locally-produced pork from small-scale and niche market operations.