

Livestock Update


Beef - Horse - Poultry - Sheep - Swine

September 2014

This LIVESTOCK UPDATE contains timely subject matter on beef cattle, horses, poultry, sheep, swine, and related junior work. Use this material as you see fit for local newspapers, radio programs, newsletters, and for the formulation of recommendations.

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Scott P. Greiner, Extension Project Leader
Department of Animal & Poultry Sciences

Invent the Future

Dates to Remember

SHEEP

OCTOBER

24-25 Virginia Tech Basics Workshop. (*Pre-registration required – limited to 25 participants*).
Copenhaver Sheep Center. Blacksburg. **Contact:** Scott Greiner, (540) 231-9159;
email: sgreiner@vt.edu

DECEMBER

6 Annual Virginia Fall Bred Ewe & Doe Sale. 1:00 P.M. Rockingham County
Fairgrounds. Harrisonburg. **Contact:** Scott Greiner (540) 231-9159; email:
sgreiner@vt.edu

September Beef Herd Management Advisor

Scott P. Greiner & Mark A. McCann
Extension Beef Specialists, Virginia Tech

September typically marks the beginning of the busiest calf-marketing time of the year. This year excitement is at an all-time high as a result of summer calf prices and the fall price forecast. Cow-calf producers are likely to enjoy substantial profits this fall, with the most important consideration being how to best utilize these returns from your cattle enterprise. First, make record of this moment for your personal time capsule. Secondly, assess your debt along with critical areas on the farm which require capital to improve. Fences, facilities and other equipment frequently make the list. As you weigh reinvestment options in your operation consider those which most impact your herd's productivity. Correcting soil fertility and pH, weed control and overseeding legumes are all options which provide returns on your investment. Upgrading facilities provides opportunities for enhanced management strategies which provide return on investment. Examples include appropriate facilities to wean, feed, and precondition calves post-weaning. Additionally, working facilities which accommodate an AI program can provide a significant upgrade to herd genetics. These are rare times in the cattle business, be sure that you prepare yourself for whenever the leaner times return.

Spring Calving Herds (January-March)

General

- Finalize plans for marketing of calf crop. Coordinate and time weaning, vaccination program, and weaning-time management in concert with marketing plans. Calculate break-evens on various marketing options and consider risk management strategies.
- Schedule and conduct pregnancy diagnosis with veterinarian 45-60 days following breeding season. Plan a marketing strategy for open cows.
- Plan for winter by evaluating feed and forage supplies and options, including conducting forage tests to determine nutritional content of hay on hand.

Nutrition and Forages

- Body Condition Score cows at weaning and separate thin cows
- Use palatable feeds and high quality hay to background calves.
- Continue stockpiling
- Continue to manage first-calf heifers separately; give them the best forage. Thin mature cows could be added to this group.
- Continue to feed high Se trace mineral salt. A forage analysis can reveal what other minerals should be supplemented.
- Continue to manage growth of warm season grass pastures by rotational grazing. As warm season pastures approach dormancy continue to use rotational grazing to manage residue.
- Store your high quality hay in the dry.
- Collect and submit forage samples for nutrient analysis.

Herd Health

- In consultation with your veterinarian, finalize vaccination and preconditioning protocol for calf crop. Administer pre-weaning vaccinations.

Reproduction

- Make plans to pregnancy check heifers as soon as possible after bull removal. This will allow options in marketing open heifers.
- Remove bulls after 60 days for controlled calving season
- Schedule pregnancy check of cow herd with veterinarian

Genetics

- Collect 205-day weights on calf crop at appropriate time (AHIR age range 120-280 days), along with cow weights, hip heights and body condition scores (cow mature size data taken within 45 days of calf weaning measure).
- Identify replacement heifers. Utilize available tools including genetics, dam performance, individual performance, and phenotype. Restrict replacement heifer pool to those born in defined calving season.

Fall Calving Herds (September-November)

General

- Secure necessary supplies for calving season (ob equipment, tube feeder, colostrum supplement, ear tags, animal health products, calving book, etc.)
- Move pregnant heifers and early calving cows to calving area about 2 weeks before due date
- Check cows frequently during calving season. Optimal interval is to check calving females every 4 hours. Address calving problems early.
- Utilize calving area that is clean and well drained. Reduce exposure to scours by moving 2-3 day old pairs out of calving area to separate pasture (reduce commingling of newborn calves with older calves).
- Identify calves promptly at birth. Record birth weight, calving ease score, teat/udder score, and mothering ability of cow.
- Plan for winter by evaluating feed and forage supplies and options, including conducting forage tests to determine nutritional content of hay on hand.

Nutrition and Forages

- Evaluate growth of yearling heifers with goal of reaching 60-65% of mature weight by breeding. Depending on forage quality, supplementation may be needed to meet weight gain target.
- Continue to feed high Se trace mineral salt.
- Reserve high quality hay and pasture area for cows post-calving.
- Use grazing management to control the residue of warm season pastures as they approach dormancy. Use strip grazing as a tool to increase the efficiency of utilization of cool season pastures by cows post-calving.

- Store your high quality hay in the dry.
- Collect and submit forage samples for nutrient analysis.

Herd Health

- Ensure colostrum intake first few hours of life in newborn calves. Supplement if necessary. Newborn calves need 10% of body weight in colostrum first 24 hours of life.
- Provide selenium and vitamin A & D injections to newborn calves
- Castrate commercial calves at birth
- Monitor calves closely for scours and pneumonia, have treatment supplies on hand.

Genetics

- Collect yearling performance data (weight, height, scrotal, ultrasound) in seedstock herds.
- Evaluate bull battery and begin planning for the breeding season by evaluating herd goals and objectives.

Time for Fall Nutrition Tune-up

Dr. Mark A. McCann

Extension Animal Scientist, Virginia Tech

Fall has officially started and the seasons are changing whether you are ready or not. Fall moisture has been more varied than our summer weather causing more disparity in the quantity of fescue that is stockpiled across the state. Late fall moisture and warm temperatures can still have a positive impact on forage growth. Rain or not, growing days and temperatures will be on a diminishing trend. As we begin to close out the growing year, it is an important time to assess management items which will impact cow herd nutrition and performance.

- 1) It is not too late to forage test your hay supply. Nutrition programs are based on forage quality. Without a forage analysis winter, supplement strategies are based on guesses and costs. Both underfeeding and overfeeding have costly impacts on your cow herd's performance and profitability. **Bottom line: one of the best ways to cut corners is to forage test and supplement only what is necessary.**
- 2) Assess the nutritional status of your herd today. The best snapshot barometer of nutritional status is to body condition score your cow herd. Fall calving cows should be at a condition score of 5-6 at calving. Spring calving cows will be thinner as calves are weaned this fall. Post-weaning is the most efficient time to add weight and condition to thin cows. First and second calf heifers are typically the ones requiring the most TLC. Some stockpiled forage or 2-3 lbs/hd/d of corn gluten feed are both effective and economical. **Bottom line: Objectively evaluate the condition of your cow herd to make strategic management and supplementation decisions.**
- 3) Stockpiled fescue will hold most of its nutrient content until next January – February. Strip grazing stockpiled forages has been demonstrated to increase efficiency of forage utilization. Restricting access to stockpiled forage will reduce selective grazing while still meeting cow nutrient needs. Allowing cows access to larger areas will allow them to consume better quality forage than they need and trample residual forage. It may be more efficient to feed spring-calving, dry cows poor quality hay and allow greater stockpiled forage accumulation for later use. **Bottom line: Stockpiled forages are a valuable resource, use them wisely.**
- 4) At some point during the winter, supplemental feed is usually needed. Are you prepared to purchase and store it in an economical fashion? Have you done your shopping and preparation in advance? These items vary a great deal with size and scale of an operation. This could be pickup or tractor trailer load amounts. Storage options could be limited to bags for a small operation or a commodity shed or bin for a large one. The questions for all situations: “are you supplementing what you need” and “are you buying it as cheaply as possible”. Unfortunately, you need to have a handle on point (1) above to answer the first question. The second question really relates to the protein or energy needs and pricing your options based on a pound on TDN or crude protein. The other item that holds true for feeding cows is similar to

feeding the family, *you pay for convenience*. There are many supplement options and choices available, substituting labor for convenience is one way to potentially reduce costs. **Bottom line: When supplementing, do so wisely and economically.**

As we look ahead into late fall and winter, these considerations now can save time and money later.

BVD's Role in Shipping Fever Pneumonia

W. Dee Whittier, D.V.M., MS.

Extension Veterinarian, Cattle

Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech

BVD is a known disease causer for US cattle producers as it is contained in many commonly used vaccines and is often tested for by many producers. So what does BVD virus really do to cattle that become infected?

Bovine (cattle) Viral Diarrhea (BVD) was named, somewhat inaccurately, because very early in study of the disease, some cattle had diarrhea. In the intervening years, much study has revealed that many tissues in cattle can be infected with the BVD virus and that the most important clinical effects of BVD are reproduction and respiratory disease. Some researchers believe that one of the most important results of a BVD infection is the virus' effect on the immune cells.

Most veterinarians recommend BVD vaccination for cows to prevent the reproductive damage and for calves near weaning or shipping to reduce shipping fever pneumonia. Recent research helps us understand more about the relationship between BVD and respiratory disease. An important part of BVD spread involves calves that get infected during their pregnancy before their immune system can deal with the virus so that they become infected for life. These calves are called PI's or Persistently Infected cattle.

It is important to understand that shipping fever, the most common respiratory disease in cattle also called Bovine Respiratory Disease Complex (BRDC), is associated with a number of disease agents. Giving healthy cattle BVD virus alone does not cause shipping fever. Neither can BVD be found in all cattle with shipping fever pneumonia.

Dr. Dan Grooms from Michigan State University recently reported three research trials. In the first trial, the researchers shipped calves from Alabama to Michigan for feeding. Prior to shipment, the calves were tested and confirmed negative for BVD exposure. One of the trucks included two PI calves, providing exposure during the trip. The other truck had no PI calves. Upon arrival, half of each group were vaccinated for BVD and the other half were not. This created four treatment groups.

- PI-exposed and vaccinated
- PI-exposed and not vaccinated
- PI-free and vaccinated
- PI-free and not vaccinated

Through the finishing period, 25 percent of the non-exposed, non-vaccinated group were treated for respiratory disease, compared with 65 percent of the exposed, non-vaccinated group and 40 percent for the exposed, vaccinated group. Average daily gains were lowest in the exposed, non-vaccinated group, and feed efficiency also was numerically lower. Exposure to BVD-PI calves during marketing, transport or upon arrival correlated with

higher incidence of respiratory disease. Vaccination upon arrival reduced pneumonia rates in PI-exposed calves in this study.

Another trial looked at how PI exposure and vaccination on the farm affect feedlot performance. The researchers vaccinated half of a group of 140 calves on the farm two weeks prior to weaning. Some of the calves had previously been exposed to PI calves. After weaning, the calves were shipped to the feedlot where all received a vaccination and were placed in a pen with four PI calves. Calves with no ranch exposure to BVD and no on-farm vaccination had the most virus isolation after six, eight and 14 days of exposure in the feedlot. They also had the highest sickness rates. Those exposed on the farm and vaccinated on the farm had the lowest virus isolation and reduced disease. The researchers concluded that exposure to BVD at the cow-calf level, either naturally or through vaccination, provides some protection in the feedlot.

A third study used the same design, except none of the calves were exposed to PI animals on the farm, and thus were negative for BRD antibodies at the beginning of the trial. In this study, 42 percent of the calves not vaccinated on the farm were treated for BRD in the feedlot, compared with 35 percent for the group vaccinated on the farm. The difference in treatment rates in this study was not statistically significant.

In another study done a few years ago cattle in feedlots (Loneragan, JAVMA, 2006) were all tested as they arrived at the feedlot. Three out of 1000 calves arrived at the feedlot with persistent infections and were left in the pens. This allowed several pens of cattle to be classified as exposed (either had PI calves in their pens or in next-door pens) or non-exposed. At the end of the feeding period, 2.6% of chronically ill cattle were PI's, 2.5% of dead cattle were PI's. The risk of initial treatment for respiratory tract disease was 43% greater in cattle exposed to a PI animal. Overall, 15.9% of initial respiratory tract disease events were attributable to exposure to a PI animal.

These studies help illustrate that controlling BVD begins at the cow-calf level with vaccination, biosecurity and identification of PI calves. In Virginia, the incidence of PI calves does not justify universal testing of all calves. In herds with unexplained reproductive failure, spotty vaccination of cows or high incidence of disease, testing of calves is justified. BVD exposure will impact shipping fever as calves move to stocker operations or feedlots. Vaccination, either on the farm or after shipping, often does not totally prevent BRDC but does reduce it. Getting PI calves out of the herd and out of the cattle population will benefit all cattle operations.

Sheep Field Day & Ram Lamb Sale

Saturday, September 27, 2014

1:30 PM - Registration

2:00 PM - Educational Field Day

4:00 PM - Ram Sale

VA Tech Southwest Agriculture Research & Extension Center
12326 VPI Farm Rd., Glade Spring, Virginia (exit 29 or 26 off Interstate 81)

Selling a select group of 30 Commercial & Registered Katahdin rams selected from 14 consignors.
Rams were developed on forage-based grain on grass system which includes evaluation for
parasite resistance.

2:00 PM Field Day Program:

Fecal Egg Count: Impacts on Animal Performance - Dr. Dave Notter, Virginia Tech

Forage Analysis & Feeding Management - Dr. Mark McCann, Virginia Tech

Ram Evaluation for Growth & Parasite Resistance - Dr. Scott Greiner & Lee Wright, Virginia Tech

Sponsored by Virginia Cooperative Extension

For a sale catalog or more information contact:

Lee Wright, Virginia Tech Southwest AREC (276) 944-2200, lrite@vt.edu

or Dr. Scott Greiner, Virginia Tech (540) 231-9159, sgreiner@vt.edu

Website -- www.vtsheep.apsc.vt.edu

List of Program Participants:

Apple-Oak Meadows, Doug & Diana Saul, Springfield, OH
Beyond Blessed Farm, Chris & Mandy Fletcher, Abingdon, VA
Big H Livestock, Jim & Sally Hash, Marion, VA
Birch Cove Farm, David Coplen, Fulton, MO
Fahrmeier Katahdins, Lynn & Donna Fahrmeier, Wellington, MO
Fairmeadow, Carol Postley, Ocala, FL
Gilmer Sheep & Livestock, Travis Gilmer, Nickelsville, VA
Hound River Farm, Milledge & Roxanne Newton, Hahira, GA
Leaning Pine Farms, John Bruner, Science Hill, KY
Misty Oaks Farm, Jeff & Kathy Bielek, Wooster, OH
Shortridge Farm, Mike & Kim Shortridge, Chilhowie, VA
Triple L Farms, Larry & Lisa Weeks, Waynesboro, VA
Voress Family Farm, Eric Voress, Sydney, OH
Wade-Jean Farm, Donna Stoneback, Loudonville, OH

If you are a person with a disability and desire any assistive devices, services or other accommodations to participate in this activity,
please contact Scott Greiner at (540)231-9159 at your earliest convenience.



2014 VIRGINIA TECH SHEEP MANAGEMENT BASICS WORKSHOP

Virginia Tech Copenhaver Sheep Center
Blacksburg, VA

Friday, October 24 and Saturday, October 25
(10 AM Friday through 3 PM Saturday)

This workshop is designed for individuals with a limited amount of experience in the care and management of sheep. Special emphasis will be placed on the management practices required during and around the time of lambing. Participants will get hands-on experience with a group of ewes that will be lambing during the two-day workshop.

Topics areas to be covered include:

*Facilities and Handling, Newborn Lamb Management, Flock Health, Nutrition & Feeding Management
Reproductive Management, Basic Record Keeping & Selection*

This workshop is limited to a maximum of 25 participants. The cost is **\$40 per person**. The first 25 preregistrants will be enrolled. First-time participants will be given preference. To preregister for the workshop, utilize the form below. Detailed information will follow receipt of registration (including lodging block details).

This workshop is sponsored by:



Virginia Cooperative Extension
Virginia Tech • Virginia State University



Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, genetic information, marital, family, or veteran status, or any other basis protected by law. An equal opportunity/affirmative action employer.

Extension is a joint program of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and state and local governments.

If you are a person with a disability and desire any assistive devices, services or other accommodations to participate in this activity, please contact Scott Greiner at 540-231-9159/800-828-1120 during business hours of 8 a.m. and 5 p.m. to discuss accommodations 5 days prior to the event.

Cut Along Dotted Line and Return by September 30, 2014 (enrollment limited)

Make check payable to Virginia Sheep Producers Association

Mail form to Dr. Scott Greiner, Department of Animal & Poultry Sciences, Virginia Tech,

366 Litton Reaves Hall, Blacksburg, VA 24061

phone 540-231-9159, fax 540-231-3010, email sgreiner@vt.edu

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Virginia Tech Sheep Management Basics Workshop, October 24-25, 2014

Sheep Update

Dr. Scott P. Greiner

Extension Animal Scientist, Virginia Tech

Annual Virginia Fall Bred Ewe & Doe Sale to be Held December 6

The 2014 Virginia Sheep Producer's Association Fall Bred Ewe & Doe Sale will be held Saturday, December 6 at 1:00 PM at the Rockingham County Fairgrounds in Harrisonburg. Yearling ewes and does, ewe lambs and doe kids, along with mature ewes and does will be sold. All yearling and mature ewes and does will be sold as guaranteed pregnant. Breeds offered will include Suffolk, Hampshire, Dorset, and crossbreds (including wether dams). All does will be registered meat goats or meat goat crossbreds. For a sale catalog or more information visit the VSPA website <http://www.vasheeproducers.com/>.

2014 Virginia Performance Tested Ram Lamb & Replacement Ewe Lamb Sale

Results

The 39th Annual Virginia Performance Tested Ram Lamb Sale was held at the Virginia Sheep Evaluation Station at the Virginia Tech Shenandoah Valley AREC near Steeles Tavern on Saturday, August 23. A total of 43 rams sold for a record average price of \$467. Top-selling ram was a winter Suffolk consigned by Double Scott Farm of Princeton, WV which sold for \$1650. Replacement ewe lambs were sold immediately following the rams. A total of 38 ewe lambs sold for an average price of \$357. Ashley's Club Lambs of Lyndhurst, VA consigned the top-selling ewe lamb which brought \$750. Detailed sale results were as follows:

<u>RAMS</u>	<u>Sale Average</u>
21 Winter Suffolk	\$518
1 Fall Suffolk	\$850
9 Fall Dorset	\$483
5 Winter Dorset	\$355
3 Hampshire	\$450
2 Katahdin	\$375
1 Fall White Dorper	\$300
1 Crossbred	\$300
43 Total Rams	\$467
<u>EWE LAMBS</u>	
38 ewe lambs	\$357

The Virginia Ram Lamb Performance Test and Replacement Ewe Lamb Sale is sponsored by the Virginia Sheep Producer's Association. Information on the 2015 test and sale may be attained from Scott Greiner, Extension Sheep Specialist, Virginia Tech, phone 540-231-9159, email sgreiner@vt.edu, or visit the VT Sheep Extension website <http://www.apsc.vt.edu/extension/sheep/index.html>

Swine Production in Virginia: A Brief Summary of Data from the 2012 USDA Census of Agriculture

Mark Estienne

Tidewater Agricultural Research and Extension Center, Suffolk

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 informed decisions about the future of their own operations.

The results of the 2012 Census of Agriculture were released in May 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 is 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.

All tabulated data are subjected to an extensive disclosure review prior to publication. Any tabulated item that identifies data reported by an individual respondent or allows a respondent's data to be accurately estimated or derived is "suppressed" and coded with a "D". For example, if there is only one swine 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, are not reported. A "D" appears for those items on the appropriate line and in the appropriate column of the table so specifics of an individual's operation are 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.

For Census of Agriculture publications, the U.S. is divided into regions. Virginia is included in Region 2 along with Alabama, Delaware, Georgia, Maryland, Kentucky, North Carolina, South Carolina, Tennessee, and West Virginia.

SWINE PRODUCTION IN U.S. REGION 2

Table 1 contains swine production data for the U.S. and for states within Region 2 of the U.S. for the past two censuses. Of the U.S. total for 2012, states within this region accounted for approximately 15% of the farms with hogs and pigs, and inventory on December 31, approximately 18% of the hogs and pigs kept for breeding, and approximately 19% of the hogs and pigs sold. Region 2 totals for each of these items decreased from 2007 to 2012. North Carolina remains the dominant state in the region in terms of swine production and of the region's totals, accounted for 23% of the farms with hogs and pigs, and approximately 90% of the inventory on December 31, hogs and pigs kept for breeding, and hogs and pigs sold.

From 2007 to 2012, totals for these different indices of swine production decreased in each state with a few exceptions. The number of farms with hogs and pigs increased in South Carolina (by 3%) and Virginia (by 2%); the number of hogs and pigs on December 31 and the number of hogs and pigs kept for breeding increased in Tennessee; and the number of hogs and pigs sold increased for Kentucky.

SWINE PRODUCTION IN VIRGINIA AND INDUSTRY CHANGES

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 2012. There was a dramatic, 77% decrease in the number of swine farms between 1987 and 2002, reflective of a change in the swine industry 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., the largest pork processor in the world, but also the world's largest pork producer. Smithfield has nearly 900,000 sows in the U.S. and operations in Mexico, Poland, and Romania that bring its worldwide total to over 1 million sows, as reported by *Successful Farming*. The top 25 operations in terms of sow numbers can be seen at: http://www.agriculture.com/uploads/assets/promo/external/pdf/PP2013_03.pdf.

Table 1. USDA Census Data for Pork Production in States in Region 2 and the United States.

State	Farms with hogs and pigs ¹		Inventory ²		Hogs and pigs for breeding		Hogs and pigs sold	
	2007	2012	2007	2012	2007	2012	2007	2012
Alabama	753	689	178,275	142,555	18,291	15,321	733,285	446,448
Delaware	77	59	8,955	5,891	2,565	1,527	49,898	23,422
Georgia	1,111	866	263,471	153,733	44,111	21,114	942,400	696,608
Maryland	412	333	D ³	19,869	4,324	2,632	123,734	D ³
Kentucky	1,498	1,284	348,023	313,360	42,354	34,911	802,782	933,620
North Carolina	2,836	2,217	10,134,004	8,901,434	1,010,883	896,231	43,241,680	34,456,613
South Carolina	812	838	293,793	224,076	27,765	9,195	1,091,982	758,876
Tennessee	1,566	1,297	138,207	147,795	12,967	15,466	470,213	344,574
Virginia	1,240	1,265	371,176	239,899	32,187	8,460	965,117	559,658
West Virginia	955	725	8,948	5,873	1,548	1,362	19,588	8,712
<i>Total</i>	11,260	9,573	11,744,852 ⁴	10,154,485	1,196,995	1,006,219	48,440,679	38,228,531 ⁴
U.S. Total	75,442	63,246	67,786,318	66,026,785	6,290,610	5,709,339	206,807,181	199,115,305

¹Farm 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.

²Data as per December 31 of census year.

³Any 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".

⁴Totals do not include data from Maryland.

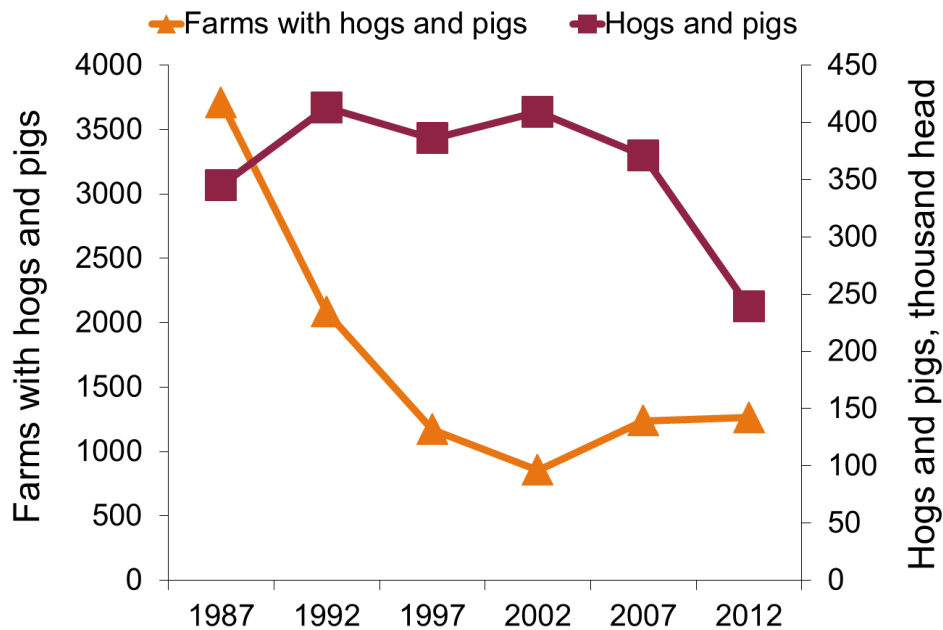


Figure 1. Number of farms in Virginia with hogs and pigs and the number of hogs and pigs on December 31 of Census of Agriculture years from 1987 to 2012.

Although there was a large exodus of Virginia swine farmers during the period represented in Figure 1, swine inventory remained relatively constant between 1987 and 2007, averaging approximately 385,000. This is indicative of fewer, but larger swine farms. The subsequent decrease in hog and pig numbers from 2007 to 2012, however, can be explained, at least in part, by a decrease in the number of larger farms. For example, from 2007 to 2012, the number of farms with 1,000 or more hogs and pigs decreased 32.5% (from 43 to 29) and farms with 500 to 999 head decreased 80% (from 10 to 2).

An interesting aspect of 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, and by 2% from 2007 to 2012. Data reported from the censuses indicates that the overall increase in the number of farms in Virginia with hogs and pigs is due to increases in the number of smaller sized operations. As shown in Figure 2, the number of operations with 1 to 24 head and 25 to 49 head increased from 2002 to 2007 (55% and 4%, respectively) and again from 2007 to 2012 (2% and 21%, respectively). The number of hog farms with 50 to 99 head increased from 2002 to 2007 and remained the same between 2007 and 2012. The other four size categories all showed overall decreases from 2002 to 2012. The increases in the numbers of the smallest size operations represents an increasing number of small-scale and niche market swine farmers who produce pork for consumers who prefer meat from hogs reared locally in less-intensive systems. For example, a popular website (<http://www.eatwild.com/products/virginia.html>) lists at least 25 small farms in Virginia raising pork for local consumers.

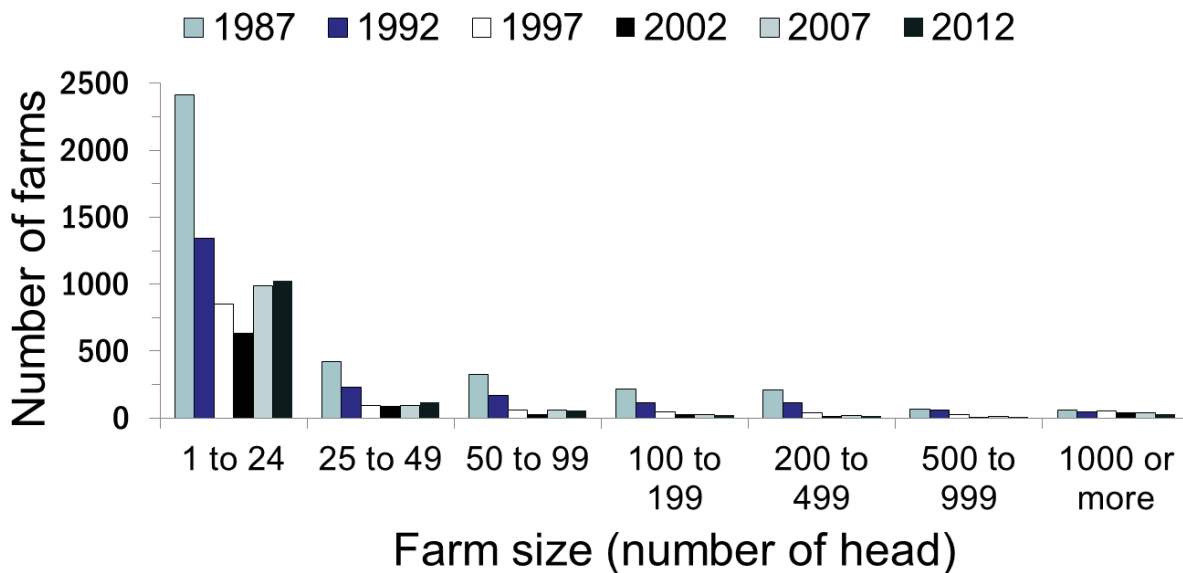


Figure 2. Number of various size farms in Virginia with hogs and pigs for Census of Agriculture years from 1987 to 2012.

FARMS IN VIRGINIA WITH HOGS AND PIGS KEPT FOR BREEDING

In 2007, there were 606 farms in Virginia with a total of 32,187 hogs and pigs kept for breeding. The Census of Agriculture for 2012, however, revealed that there were 706 farms with a total of

only 8,460 head (Table 1). Thus, between the last two censuses, the number of farms with breeding sows in Virginia increased approximately 17% but total inventory on these operations decreased by nearly 74%. There are two main reasons for these changes. First, as discussed above, Virginia has seen an increase in the number of small operations, and it is apparent that many of these smaller farms have breeding sows.

Secondly, the dramatic decrease in the size of the state's sow herd is reflective of a major change within Murphy-Brown, LLC operations in Virginia. Murphy-Brown is the live hog production component of Smithfield Foods, Inc. and for many years owned and operated numerous large sow farms, mainly in the southeastern corner of the Commonwealth. Around 2010, however, these sow farms were depopulated, and the buildings were remodeled and renovated into wean-to-finish barns. In the current Murphy-Brown production flow, pigs are weaned from sows on farms in North Carolina and then transported to wean-to-finish farms in Virginia. After reaching market weight, hogs are then transported to the nearby Smithfield Foods processing facility.

Advantages of this production system include reduced transportation costs. Moreover, compared to three site production (sow farm, nursery, and grow-finish); wean to finish units result in reduced labor associated with moving pigs, and washing and disinfecting facilities. Down-time between groups of pigs and animal stress caused by mixing and re-socialization are also decreased. In that Murphy-Brown now maintains a significant number of finishing spaces in Virginia, it is anticipated that the states hog and pig inventory will return to a number similar to those prior to 2012 (Figure 1).

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. Still remaining there are several large production units, although numbers of hogs and pigs were not reported in the 2012 Census of Agriculture for reasons described above. However, the latest census reveals that the majority of farms with hogs and pigs and farms with hogs and pigs kept for breeding are located in counties in or near the Blue Ridge/Appalachian mountains. Table 2 contains the leading counties in Virginia in terms of farms with hogs and pigs and farms with hogs and pigs kept for breeding. The majority of swine farms in these counties are small size operations.

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) Smithfield Foods, Inc., a vertically integrated company that controls their own hog production

Table 2. Leading counties in Virginia in terms of number of hog farms¹ and number of farms with hogs and pigs kept for breeding.

Number of farms with hogs and pigs			Number of farms with hogs and pigs kept for breeding		
Rank	County	Number	Rank	County	Number
1	Rockingham	57	1	Augusta	35
2	Loudoun	44	2	Loudoun	26
3	Buckingham	37	3	Rockingham	25
4	Fauquier	34	4	Bedford	23
5	Bedford	33	5	Culpeper	22
5	Pittsylvania	33	6	Buckingham	21
7	Shenandoah	31	7	Floyd	19
8	Halifax	30	7	Rockbridge	19
9	Floyd	29	7	Shenandoah	19
10	Culpeper	28	10	Clarke	18

¹Farm 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.

and supply through Murphy-Brown LLC company-owned farms or contractual arrangements; In Virginia, this includes a number of wean-to-finish farms, 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 a complete reversal of past trends and thus 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.