

# Livestock Update

***Beef - Horse - Poultry - Sheep - Swine***

**August 2013**

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**

## Dates to Remember

### BEEF

#### OCTOBER

25 19<sup>th</sup> Annual Hokie Harvest Sale, VT Beef Cattle Center, Blacksburg.  
**Contact:** Dr. Dan Eversole, (540) 231-4738, email: [deversol@vt.edu](mailto:deversol@vt.edu)

### HORSE

#### SEPTEMBER

12-15 State 4-H Championship Horse & Pony Show. Virginia Horse Center. Lexington, VA. **Contacts:** Celeste Crisman, (540) 231-9162; email: [ccrisman@vt.edu](mailto:ccrisman@vt.edu) or Jessica Tussing, (540) 231-6345; email: [jessit07@vt.edu](mailto:jessit07@vt.edu)

### SHEEP

#### AUGUST

24 Virginia Performance Test Ram Lamb Sale. Shenandoah Valley AREC. Steeles Tavern. **Contact:** Scott Greiner, (540) 231-9159; email: [sgreiner@vt.edu](mailto:sgreiner@vt.edu)

31 14<sup>th</sup> Annual Virginia Tech Sheep Center Production Sale. Alphin-Stuart Livestock Arena. Blacksburg. **Contact:** Scott Greiner, (540) 231-9159; email: [sgreiner@vt.edu](mailto:sgreiner@vt.edu)

## **August Herd Management Advisor**

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

As the calendar moves into August, hopefully the dog days of summer 2013 are nearing their end. Early summer rains provided abundant forage during June. August forage is more dependent on the amount of thunderstorms you receive in July. A dry July will probably leave an adequate amount of available forage, albeit mature and lower in nutrient content. A wet July will can provide a lot of warm season forage in the form of bermudagrass or crabgrass. In spite of the moisture, fescue growth is generally suppressed due to temperature. Regardless of the quantity of July forage growth, August is the time to graze, clip or mow areas that will be stockpiled. It is important to remove most of the standing growth to allow the new growth to accumulate. Generally a fourth to a third of the grazing area is set aside for stockpiling. Once forage is removed, 40-60 lb. N per acre should be applied in mid to late August in the cooler areas of the region, or early to mid-September in the southern parts of the region.

### **Spring Calving Herds (January-March)**

#### **General**

- End breeding season early in month (if not already completed).
- Make plans for marketing of calf crop. Plan early to time weaning, vaccination program, and weaning management in concert with marketing plans. Calculate break-evens on various marketing options and consider risk management strategies.
- Begin planning for winter by evaluating feed and forage supplies and options.

#### **Nutrition and Forages**

- Continue to manage first-calf heifers separately; give them best forage and supplement
- 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
- Store your high quality hay in the dry.
- Collect and submit forage samples for nutrient analysis.

#### **Herd Health**

- Continue parasite and fly control program for herd. Monitor fly numbers to insure tags are still effective.
- 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).

### **Fall Calving Herds (September-November)**

#### **General**

- Prepare for calving season by checking inventory and securing necessary supplies (ob equipment, tube feeder, colostrum supplement, ear tags, animal health products, calving book, etc.)
- Begin planning for winter by evaluating feed and forage supplies and options.

#### **Nutrition and Forages**

- Continue to feed high Se trace mineral salt.
- Body condition score bred females. Plan nutrition and grazing program based on BCS. This is the most efficient period to put weight and condition on thinner cows prior to calving
- Evaluate growth and development of replacement heifers. Adjust nutrition and management to achieve 65% of mature weight by breeding season. Low levels of protein supplementation can be effective in stimulating performance if forage has become mature.
- Reserve high quality hay and a pasture area for calves post-weaning.
- Manage growth of warm season grass pastures by rotational grazing
- Store your high quality hay in the dry.
- Collect and submit forage samples for nutrient analysis.

#### **Herd Health**

- Administer mid-summer deworming on replacement heifers and pregnant heifers
- Continue parasite and fly control program for herd.

#### **Genetics**

- 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.
- Evaluate bull battery and begin planning for the breeding season by evaluating herd goals and objectives.

# Phosphorus Supplementation of Beef Cattle

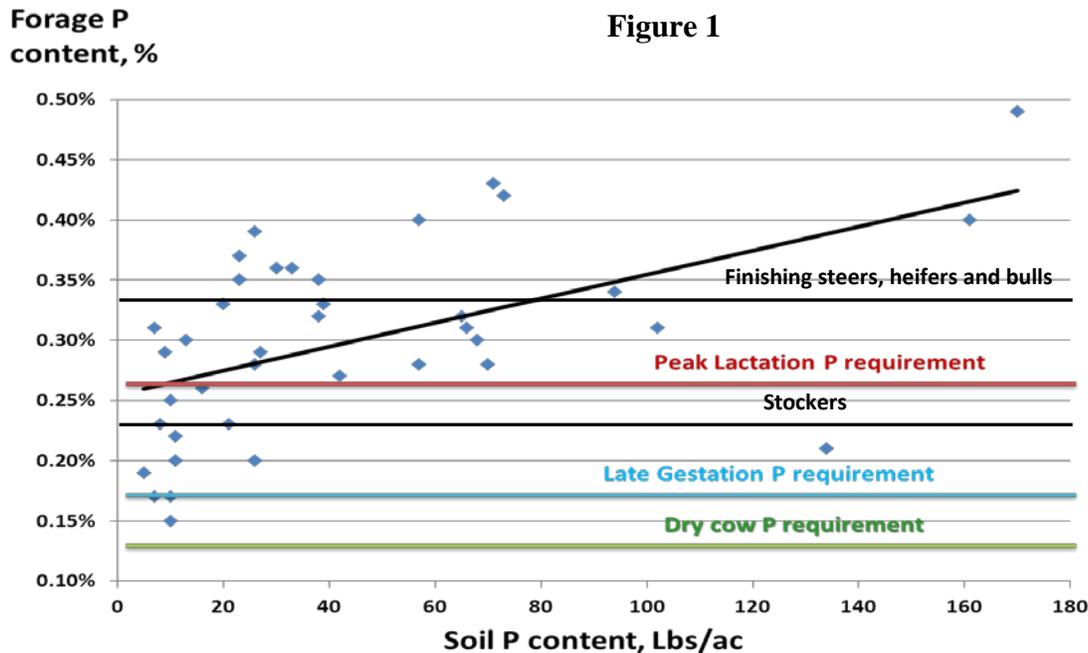
Mark A. McCann, Scott J. Neil and Deidre D. Harmon  
Virginia Tech

Phosphorus in Virginia continues to be an important topic among crop, poultry and livestock production systems. The draft TMDL proposal for the Chesapeake Bay provides aggressive reduction targets for nitrogen, phosphorus and sediment. Virginia beef cow/calf production systems have an opportunity to limit phosphorus inputs and thus increase economic benefits while minimizing environmental impacts. In the past, phosphorus has often been over-supplemented due to its once cheap cost and at the advice of many nutritionists and veterinarians. However, more emphasis should be placed on meeting, not exceeding mineral requirements to be both economically and environmentally responsible.

In an effort to more accurately and efficiently supplement phosphorus (P), the Virginia Agricultural Council, Virginia NRCS (Conservation Innovation Grant) and Virginia Cooperative Extension cooperated on a project which collected information and samples from beef cattle farms in the Chesapeake Bay watershed counties. Samples collected from participating farms included soil, forage and fecal samples, a questionnaire regarding fertilization and supplementation practices and a tag from their free-choice mineral. Forage samples were submitted to Cumberland Valley Labs for nutrient and mineral analysis. Soil samples were analyzed by Virginia Cooperative Extension Soil Testing Laboratory and Fecal P was analyzed in the Dairy Science Ruminant Nutrition Lab. Two counties with the most samples (80) from the Shenandoah Valley are summarized in this update.

## Results

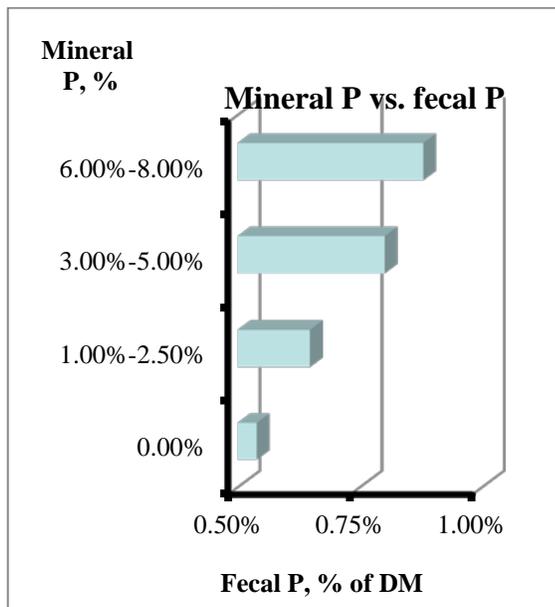
The figure below displays farm data from the two counties plotting forage P content by the soil P level. Although related, there is considerable variation in forage P content. Soil P and forage P were moderately correlated ( $r=.42$ ,  $P<.01$ ). In general, as soil P increased, there was tendency for forage P to increase. The variation in the relationship is probably due to differences in moisture, stage of forage growth and plant species.



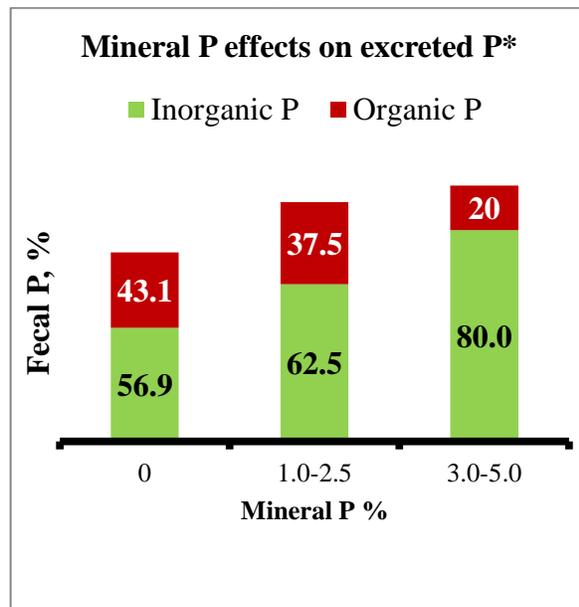
Perhaps more telling are the lines drawn across the graph relating the P requirement for various classes of beef cattle. All the fresh forage samples were adequate in P content to meet a dry cow's requirements, while 98 % met late gestation P requirement and 87 % met P requirement during peak lactation. While feedlot cattle and fast growing bulls have the highest P requirement, these classes are fed high concentrate rations which are high in P. Stocker cattle generally have a more moderate growth rate and their nutrition program utilizes either grazed or stored forages.

Cattlemen who participated in the study also submitted tags of the free-choice mineral they were feeding. Farm mineral supplements were categorized into four levels of P content (0, 1.0-2.5, 3.0-5.0, and > 6.0 %). Mineral supplement P content was unrelated to forage or hay P content. In fact, the average forage P content from the farms for the 0, 1-2.5, 3-5 and 6-8 % mineral categories was 0.27, 0.37, 0.37 and 0.46 %, respectively. As P content of the mineral supplement increased the total phosphorus concentration of the feces also increased (Figure 2). Also, as the Total P of the feces increased, a greater percentage of the P was in the inorganic form. This is characteristic of P excretion on diets which exceed the animal's requirement. The inorganic form of P is water soluble and provides a greater runoff risk.

**Figure 2**



**Figure 3**



**Conclusion**

Preliminary results from the field trial indicate on the majority of farms forage P was adequate for stockers and lactating cows. Removing P from the mineral supplement would reduce P excretion and also save money. Results also indicate that sampling grazed forage and /or hay is the best way to accurately gauge the phosphorus status of their herds. Sixty-five percent of the cattlemen participating in the study were receptive to modifying their P supplementation based on forage test results while only six percent were opposed to any modification.

Bottom line phosphorus supplementation is important; however there is no advantage to providing more than requirements. Actually it costs more and is an environmental concern.

## 2013 Across-Breed EPD Table

Dr. Scott P. Greiner  
Extension Animal Scientist, Virginia Tech

The table of adjustment factors to be used to estimate across-breed expected progeny differences (AB-EPDs) for eighteen breeds was released at the Beef Improvement Federation Annual Meeting in Oklahoma City, OK on June 14 (see Table 1). Across-breed adjustment factors have been calculated for growth traits and maternal milk since 1993. Adjustment factors for carcass traits have been calculated since 2009; to be included, breeds must have carcass data in the U.S. Meat Animal Research Center (USMARC) database and report their carcass EPDs on an actual carcass basis using an age-adjusted endpoint. Bulls of different breeds can be compared on the same EPD scale by adding the appropriate adjustment factor to the EPDs produced in the most recent genetic evaluations for each of the eighteen breeds. The AB-EPDs are most useful to commercial producers purchasing bulls of more than one breed to use in cross-breeding programs. For example, in terminal cross-breeding systems, AB-EPDs can be used to identify bulls in different breeds with high growth potential or favorable carcass characteristics.

As an example, suppose a Red Angus bull has a weaning weight EPD of + 62.1 lb and a Charolais bull has a weaning weight EPD of + 21.0 lb. The across-breed adjustment factors for weaning weight (see Table 1) are -23.2 lb for Red Angus and 38.1 lb for Charolais. The AB-EPD is  $62.1 \text{ lb} - 23.2 \text{ lb} = 38.9 \text{ lb}$  for the Red Angus bull and  $21.0 + 38.1 = 59.1 \text{ lb}$  for the Charolais bull. The expected yearling weight difference when both are mated to cows of another breed (e.g., Hereford) would be  $38.9 \text{ lb} - 59.1 \text{ lb} = -20.2 \text{ lb}$ .

Most breed associations publish EPDs at least on an annual basis. These EPDs predict differences expected in performance of future progeny of two or more bulls within the same breed for traits including birth weight, weaning weight, yearling weight, and maternal milking ability (as reflected in progeny weaning weights). Normally, the EPDs of bulls from different breeds cannot be compared because most breed associations compute their EPDs in separate analyses and each breed has a different base point. The across-breed adjustment factors allow producers to compare the EPDs for animals from different breeds for these traits; these factors reflect both the current breed difference (for animals born in 2011) and differences in the breed base point. They should only be used with EPDs current as of June 2013 because of potential changes in EPD calculations from year-to-year.

It is important to note that the table factors (Table 1) do not represent a direct comparison among the different breeds because of base differences between the breeds. They should only be used to compare the EPDs (AB-EPDs) of animals in different breeds. To reduce confusion, breed of sire means (i.e., when sires from two different breeds are mated to cows of a third, unrelated breed) between 2011 born animals under conditions at USMARC are presented in Table 2.

The adjustment factors in Table 1 were updated using EPDs from the most recent national cattle evaluations conducted by each of the eighteen breed associations (current as of March 2013). The breed differences used to calculate the factors are based on comparisons of progeny of sires from each of these breeds in the Germplasm Evaluation

Program at USMARC in Clay Center, Nebraska. These analyses were conducted by USMARC geneticists Larry Kuehn (email: [Larry.Kuehn@ars.usda.gov](mailto:Larry.Kuehn@ars.usda.gov); ph: 402-762-4352) and Mark Thallman (email: [Mark.Thallman@ars.usda.gov](mailto:Mark.Thallman@ars.usda.gov); ph: 402-762-4261).

**TABLE 1: ADJUSTMENT FACTORS TO ADD TO EPDs OF EIGHTEEN DIFFERENT BREEDS TO ESTIMATE ACROSS BREED EPDs**

Breed	Birth Wt.	Weaning Wt.	Yearling Wt.	Maternal Milk	Marbling Score <sup>a</sup>	Ribeye Area	Fat Thickness
Angus	0.0	0.0	0.0	0.0	0.00	0.00	0.000
Hereford	2.7	-3.5	-23.6	-17.1	-0.32	-0.09	-0.050
Red Angus	3.4	-23.2	-27.9	-3.9	-0.30	-0.08	-0.029
Shorthorn	5.8	11.3	38.8	20.2	-0.16	0.21	-0.142
South Devon	3.2	-4.8	-6.6	-0.3	0.08	0.16	-0.111
Beefmaster	6.3	35.7	29.5	9.9			
Brahman	11.0	42.8	5.9	23.2			
Brangus	4.5	14.6	6.0	5.8			
Santa Gertrudis	6.6	36.2	48.3	12.4	-0.66	-0.05	-0.116
Braunvieh	1.9	-21.6	-42.3	0.1	-0.67	0.22	-0.102
Charolais	8.6	38.1	45.3	6.9	-0.44	1.02	-0.220
Chiangus	2.2	-20.5	-40.2	4.7	-0.45	0.45	-0.157
Gelbvieh	2.7	-18.2	-25.6	3.6	-0.41	0.78	-0.136
Limousin	3.8	-1.8	-35.9	-8.7	-0.71	1.09	
Maine-Anjou	4.2	-15.3	-36.7	-6.8	-0.84	0.95	-0.229
Salers	1.8	-4.8	-19.5	2.2	-0.10	0.79	-0.207
Simmental	3.7	-5.9	-10.9	-0.8	-0.42	0.53	-0.141
Tarentaise	1.7	30.3	20.3	24.1			

<sup>a</sup>Marbling score units: 4.00 = Sl<sup>00</sup>; 5.00 = Sm<sup>00</sup>

**TABLE 2: BREED OF SIRE MEANS FOR 2011 BORN  
ANIMALS UNDER CONDITIONS SIMILAR TO USMARC**

Breed	Birth Wt.	Weaning Wt.	Yearling Wt.	Maternal Milk	Marbling Score <sup>a</sup>	Ribeye Area	Fat Thickness
Angus	87.3	577.0	1045.3	565.3	6.09	13.12	0.611
Hereford	91.7	571.5	1009.7	543.2	5.36	12.87	0.552
Red Angus	88.1	561.5	1013.0	558.3	5.71	12.77	0.570
Shorthorn	93.7	556.5	1022.9	564.8	5.45	12.98	0.448
South Devon	91.4	566.0	1030.0	564.9	6.11	13.07	0.500
Beefmaster	92.1	575.6	1002.9	554.2			
Brahman	98.3	587.7	989.3	571.9			
Brangus	90.8	568.2	1008.4	559.3			
Santa Gertrudis	92.6	570.5	1013.9	555.4	4.96	12.66	0.487
Braunvieh	89.9	549.4	981.8	576.4	5.46	13.63	0.432
Charolais	94.7	592.4	1047.7	556.1	5.22	13.92	0.381
Chiangus	90.9	546.2	987.0	557.9	5.37	13.24	0.449
Gelbvieh	89.6	575.4	1027.1	571.4	5.26	13.78	0.422
Limousin	90.8	574.7	1007.7	555.7	4.90	14.33	
Maine-Anjou	91.8	554.1	1000.8	555.2	4.99	13.80	0.372
Salers	89.0	566.4	1019.5	564.0	5.73	13.52	0.394
Simmental	91.5	586.1	1038.8	564.4	5.29	13.82	0.402
Tarentaise	89.1	576.2	1008.2	567.0			

<sup>a</sup>Marbling score units: 4.00 = SI<sup>00</sup>; 5.00 = Sm<sup>00</sup>

# **Applied Reproduction in Beef Cattle Event in Staunton, Virginia October 15 - 16, 2013**

Dr. Dee Whittier  
Extension Veterinarian, Beef Cattle, Virginia Tech

Cattle producers, veterinarians and other industry personnel from across the country will have the opportunity to participate in another installment of an outstanding educational event called "Applied Reproductive Strategies in Beef Cattle". This year's meeting will be held at the Stonewall Jackson Hotel in Staunton, VA on October 15 and 16, 2013.

The concept of "Applied Reproductive Strategies in Beef Cattle" began about 10 years ago when leaders in the area of beef cattle reproduction recognized the need for in-depth education to increase reproductive performance in beef cattle and to encourage the use of newly discovered technologies. In particular, new techniques for estrus synchronization had recently been developed which held promise for making AI in beef cattle much easier and more profitable.

In the intervening years, educational events have been held across the country in at least fourteen locations. Some Virginians have had the opportunity to attend several of these, especially when they were held in Kentucky in 2005 and Tennessee in 2010. This will be the first time, however, that an event will be held in an eastern seaboard state.

The Stonewall Jackson Hotel is a somewhat new setting for a beef cattle meeting in Virginia. This is a lovely hotel with lots of history, but newly renovated to give it lots of comfort. It is in downtown Staunton, also newly restored to showcase its history.

Sessions at the meeting will address profiting from reproduction, achieving success with estrus synchronization and artificial insemination programs, managing factors to improve pregnancy rates and using genetic tools to get the most from reproductive efforts. In addition, special current issues in reproductive management will be discussed. In this session, for the first time, there will be a session on dealing with pregnancy and birthing losses.

Speakers will include international experts including Drs. Larry Corah, Michael Smith, Dave Patterson, Cliff Lamb, Sandy Johnson, Brad Stroud, Carl Dahlen, George Perry, George Seidel, Keith Inskeep, Larry Holler, Dan Drake, John Hall and Rick Funston. Virginia experts will include Drs. Dick Saacke, John Currin, Mark McCann, Scott Greiner, Dee Whittier and Randall Hinshaw. In addition, outstanding Virginia producers Terry Slusher and Steve Hopkins will describe their successful reproductive programs.

Objectives of Applied Reproductive Strategies in Beef Cattle include:

- Improve the understanding of the physiological processes of the estrous cycle, the procedures available to synchronize estrus and ovulation and the proper application of these systems.
- Improve the understanding of methods to assess male fertility and how it affects the success of AI programs.

Put October 15 and 16, 2013 on your calendars now. A website at <http://www.cpe.vt.edu/arsbc/index.html> will provide continuing information and registration for the meeting. Reduced price early registration will be available at this site.

# Sheep Breeding Season Tips

Dr. Scott P. Greiner

Extension Animal Scientist, Virginia Tech

The start of the fall breeding season is just around the corner. Proper management of both rams and ewes prior to, during, and after the breeding season is critical for a successful subsequent lambing season.

## **Ram Management**

Often, newly purchased ram lambs are coming off a high plane of nutrition heading into their first breeding season (completing a structured performance test, or managed on the farm for high growth rates to optimize maturity). To prepare ram lambs for the breeding season, rams should be “hardened up” prior to introduction with ewes. This can be accomplished through limit feeding grain while on pasture. The amount of supplementation will vary according to the ram’s body condition and pasture quality, but as a guideline 1-2% of body weight will suffice to achieve a moderate body condition at the start of the breeding season (not excessively fat or thin). Be certain that housing and facilities provides adequate shade and ventilation so that rams can stay cool. These principles also apply to mature rams, which may be new to the flock or been in use for several years. Exposure to high temperatures can compromise the reproductive soundness of rams.

Newly acquired ram lambs should not be commingled with older, mature rams either prior to or during the breeding season. Particular care should be taken if rams from different sources (of similar age) need to be commingled, and all commingling should take place prior to the breeding season.

Prior to the start of the breeding season, all rams should be subjected to a breeding soundness exam by a veterinarian. The breeding soundness exam assesses the physical fitness of the ram, and most importantly the ram’s reproductive soundness, fertility, and capability of settling ewes. Plan ahead to allow adequate time to find a replacement ram should an existing sire be found to be a non-breeder.

Many factors influence the breeding capacity of rams, including age, breed, nutrition, management, and environment. As a general guideline, ram lambs are capable of breeding 15 to 25 ewes during their first breeding season, and most mature rams can service 50 or more ewes. All rams, and particularly ram lambs, should be observed closely to monitor their breeding behavior and libido to ensure they are servicing and settling ewes. The use of a marking harness, rotating colors every 17 days, is an excellent management tool for this purpose. A high percentage of re-marks is cause for concern. The breeding season should be kept to a maximum of 60 days for young rams. This will prevent over-use, severe weight loss and reduced libido. Severe weight loss may impair future growth and development of the young ram, and reduce his lifetime usefulness. When practical, supplementing ram lambs with grain during the breeding season will reduce excessive weight loss (feeding rate of 2% bodyweight daily). Rams used together in multiple-sire breeding pastures should be of similar age and size. Ram lambs cannot compete with mature rams in the same breeding pasture. A sound management practice is to rotate rams among different breeding pastures every 17-34 days. This practice decreases the breeding pressure on a single ram.

## **Ewe Management**

Some advance planning and simple management practices will assist in having a successful breeding season. Vaccination of the ewe flock for *Campylobacter* (vibrio) and *Chlamydia* are important for abortion disease control. For ewe lambs and ewes not previously vaccinated, these products typically require an initial injection prior to the breeding season followed by a second vaccination during gestation. In subsequent years, a single booster vaccination is required. Follow product label directions when administering any vaccine. A month prior to the breeding season is also an opportune time to trim and inspect feet on the ewe flock, and perform preventative foot care. This is also a good time to make final culling decisions, and sell poor producing and thin ewes.

Flushing is the practice of increasing energy intake, and therefore body condition, during the 10-14 days prior to breeding. This practice has been shown to be effective in increasing ovulation rates, and thereby increasing lambing percentage by 10-20%. The response to flushing is affected by several factors, including the body condition of the ewe and time of the breeding season. Ewes that are in poor body condition will respond most favorably to the increase in energy, whereas fat ewes will show little if any response. Flushing can be accomplished by moving ewes to high quality pastures, or through providing .75 to 1.25 lb. corn or barley per head per day from 2 weeks pre-breeding through 4 weeks into the breeding season. Provide a high-selenium, sheep mineral free choice.

Like rams, ewes are also prone to heat stress during the breeding seasons. Prolonged exposure to high temperatures can have an effect on ewe fertility and embryo survival. To help reduce these embryo losses and resulting decrease in lamb crop, minimize handling during the heat of the day and allow the flock access to a cool, shaded area.

## **Ram Management After the Breeding Season**

Young rams require a relatively high plane of nutrition following the breeding season to replenish body condition and meet demands for continued growth. Body condition and projected mature size of the ram will determine his nutrient requirements during the months following the breeding season. Rams should be kept away from ewes in an isolated facility or pasture after the breeding season. In the winter months, provide cover from extreme weather that may cause frostbite to the scrotum resulting in decreased fertility.

## **Sheep Update**

Dr. Scott P. Greiner

Extension Animal Scientist, Virginia Tech

### **August 24 Sheep Field Day, Performance Tested Ram Lamb Sale and Replacement Ewe Lamb Sale at Shenandoah Valley AREC**

A full day of sheep activities are planned for Saturday, August 24 at the Virginia Sheep Evaluation Station near Steeles Tavern, Virginia. At 10:30 a.m. a Sheep Field Day with educational programs will be held. The 38<sup>th</sup> Annual Performance Tested Ram Lamb Sale will begin at 1:00 p.m. The top end of the eighty Suffolk, Dorset, Hampshire, Katahdin, White Dorper, and North Country Cheviot rams being evaluated on the 63-day test will be sold. All rams sold will be evaluated for structural and reproductive soundness, and will be sold as guaranteed breeders. Complete performance information will be available, including ultrasound measurements for carcass traits. Following the ram sale, the Virginia Sheep Producers Replacement Ewe Lamb Sale will be held. A select group of ewe lambs ready to breed will be offered. The Virginia Sheep Evaluation Station is located at the Virginia Tech Shenandoah Valley Agriculture Research and Extension Center, 0.5 mile east of I-81 at Exit 205 (just south of Staunton, VA). For sale information and a catalog, contact Scott Greiner, Department of Animal and Poultry Sciences, Virginia Tech, Blacksburg, VA, 24061, phone (540)231-9159 or email [sgreiner@vt.edu](mailto:sgreiner@vt.edu). Current information is also available on the Virginia Tech Sheep Extension and Education website at <http://www.vtsheep.apsc.vt.edu/>.

### **Virginia Tech Sheep Center to Host 14th Annual Production Sale August 31**

The 14<sup>th</sup> Annual Virginia Tech Sheep Center Production Sale will be held Saturday, August 31 at the Alphin-Stuart Livestock Arena on the campus of Virginia Tech. The sale offering will include Suffolk and Dorset ram lambs, along with Suffolk and Dorset ewe lambs. Complete performance data including EPDs and carcass ultrasound records are available. Proceeds from the sale will be used to support the sheep teaching, extension, and research missions of the Department of Animal & Poultry Sciences. Sale details and catalog are available on the web at [http://www.apsc.vt.edu/centers/sheepcenter/index\\_sheep.htm](http://www.apsc.vt.edu/centers/sheepcenter/index_sheep.htm) For additional information contact Dr. Scott Greiner, phone 540-231-9159 or email [sgreiner@vt.edu](mailto:sgreiner@vt.edu) .

# Sheep Field Day, 38<sup>th</sup> Annual Virginia Performance Tested Ram Lamb Sale and Replacement Ewe Lamb Sale

Saturday, August 24, 2013  
10:30 AM - Field Day  
1:00 PM - Ram & Ewe Sale

Virginia Sheep Evaluation Station  
Shenandoah Valley Research and Extension Center  
Raphine, Virginia (exit 205 off Interstate 81)

Selling ~60 Performance Tested Rams and 40+ Replacement Ewe Lambs  
Dorset, Suffolk, Hampshire, North Country Cheviot,  
Katahdin, & White Dorper

Field Day Program to include information on Flock Management,  
Lamb Marketing, Forages, Profitability, and Sheep Health

*Sponsored by Virginia Cooperative Extension and Virginia Sheep Producers  
Association*

For a sale catalog or more information contact:  
Dr. Scott Greiner, Virginia Tech- (540) 231-9159, [sgreiner@vt.edu](mailto:sgreiner@vt.edu)  
Website -- [www.vtsheep.apsc.vt.edu](http://www.vtsheep.apsc.vt.edu)

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.

*Invent the Future*

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY  
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