Livestock Update

Beef - Horse - Poultry - Sheep - Swine

February 2016

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.

IN THIS ISSUE:

Dates to Remember ................................................................................................................................... 2
February Herd Management Advisor ......................................................................................................... 3
2015 Culpeper Senior BCIA Bull Sale Results ........................................................................................... 6
Ten Steps to Buying the Right Bull ............................................................................................................. 8
2016 Southwest Bull Test: Sale, Open House, & Bred Heifer Sale ............................................................ 10
What is Changing with Antibiotic Use in Livestock? ............................................................................... 11
Lambing Management Tips ...................................................................................................................... 13

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**Dates to Remember**

**BEEF**

**MARCH**

20th- 2016 Southwest Bull Test: Sale, Open House, & Bred Heifer Sale
1:00pm to 4:00pm at Hillwinds Farm, owned and operated by Tim Sutphin of Dublin, Virginia.
For complete details and progress reports visit the Virginia BCIA website [http://www.bcia.apsc.vt.edu](http://www.bcia.apsc.vt.edu) or phone 540-231-2257. Video clips of the bulls and an online catalog will also be posted.

26th- Virginia BCIA Southwest Bull Test Sale, 12:00 pm. Wytheville, Virginia.
For complete details and progress reports visit the Virginia BCIA website [http://www.bcia.apsc.vt.edu](http://www.bcia.apsc.vt.edu) or phone 540-231-2257. Video clips of the bulls and an online catalog will also be posted.
February marks the midst of winter for the region, although the days are gradually getting longer and spring season and return of green grass is around the corner. Take the time now to think and prepare for the warmer days ahead. Winter soil sampling allows plans to be formulated for addressing identified nutrient needs in pastures and hay fields. Likewise, February is the time to frost seed clover. Incorporating clover to pastures is an economical management practice that easily pays its way. Clover addition to tall fescue pastures results in improved forage quality and dilution of endophyte infected fescue and its associated toxins. Clover is also valued for its nitrogen fixing abilities, and is has benefit as a low-cost method of adding nitrogen to pastures. Be sure check with your local extension office for variety and planting tips.

February is also a good time to summarize and evaluate annual production costs, and identify cost and income factors which impact your bottom line Enterprise budgets are an excellent tool to use for this purpose. Enterprise budgets can be constructed for a number of components of the operation, including replacement heifer development, implementation of an AI program, creep feeding, and calf backgrounding. By combining budgets with key assumptions it is possible to consider the adoption (or change) of certain management practices in terms of their costs and potential returns. Grazed forages are our best value for the cow. As highlighted earlier, the addition of clovers to pastures, along with strategic weed control and stockpiling are management options worthy of consideration in the upcoming year to reduce reliance on harvested forages/feedstuffs and decrease annual feed costs.

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

**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.)
- 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 is every 4 hours.
- Utilize calving area that is clean and well drained. Reduce exposure to scour 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.
**Nutrition and Forages**

- Evaluate growth of yearling heifers with goal of reaching 60-65% of mature weight by breeding. Depending on forage quality, supplementation maybe needed to meet weight gain target.
- Feed better quality hay during late gestation and early lactation. If quality is unknown, submit sample for nutrient analysis (local extension office can assist). Target quality is 11-12% crude protein and 58-60% TDN. Supplement protein and/or energy as needed.
- Frost seed clovers mid to late month. Four lbs red clover and 2lbs of ladino is recommended. Best success will be achieved by choosing areas with little or no plant residue.

**Herd Health**

- Ensure colostrum intake first few hours of life in newborn calves. Supplement if necessary. Newborn calves need 10% of body weight in colostrums 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, have treatment supplies on hand.
- Evaluate lice control program and consult your veterinarian for recommendations.

**Genetics**

- Collect yearling performance data (weight, height, scrotal, ultrasound) in seedstock herds.

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

**General**

- Monitor cows closely during breeding season for signs of returned estrus. Contact veterinarian to evaluate fertility of bull if many cows repeat cycle. Remove bulls for to maintain controlled calving season (60-90 days).
- Begin planning marketing strategy for calf crop.
- Plan to pregnancy check heifers as soon as possible post breeding.

**Nutrition and Forages**

- Begin creep feeding or creep grazing calves if desired.
- Once breeding concludes, supplementation should be adjusted to mid-lactation nutritional requirements.
- Frost seed clovers mid to late month. Four lbs red clover and 2lbs of ladino is recommended. Best success will be achieved by choosing areas with little or no plant residue.
**Herd Health**

- Monitor calves closely for health issues, particularly respiratory disease.
- Administer 7-way clostridial vaccine and respiratory vaccinations (especially if killed products are used; booster dose given at preweaning) to calves.
- Evaluate lice control program and consult your veterinarian for recommendations.

**Genetics**

- Make plans for spring bull-buying season. Evaluate current herd bulls for progeny performance and soundness.
The Virginia Beef Cattle Improvement Association hosted the 58th Annual Culpeper Senior Bull Sale on Saturday, December 12, 2015 at Culpeper Agricultural Enterprises near Culpeper, Virginia. Fifty-one fall-born bulls representing the top end of the 86 bulls developed sold for an average price of $3671. The sale included 42 Angus bulls which averaged $3481, 6 Simental and SimAngus bulls at $4908, and 3 Gelbvieh and Gelbvieh Balancers at $3850.

The high-selling bull was SimAngus Lot 405, consigned by Reasor Simmental, Smith Reasor of Rural Retreat, Virginia and sold to Courtfield Farm of Amelia, Virginia for $7,750. This homozygous black, polled September 2014 son of S A V Bismarck 5682 had a test YW ratio of 110 and test ADG ratio of 119, along with +17.7 CED EPD, -1.9 BW EPD, +74.5 WW EPD, +113.6 YW EPD, +0.89 RE EPD. Lot 401, a purebred Simmental also consigned by Reasor Simmental, commanded a strong $5700 from Dennis Vass of Hillsville, VA. This homozygous black MR NLC Upgrade U8676 son scanned an adjusted REA of 15.2, along with a test ADG of 4.42 and EPDs of +11.0 and +112 for CED and YW, respectively. Another Reasor SimAngus, Lot 403 commanded $5100 from Tabor Farms, Inc. of Dublin, VA. This homozygous black September 2014, S A V Final Answer 0035 son posted API and TI indexes of +158 and +83 respectively, along with a CED EPD of +15.5, BW EPD of -0.7 and YW EPD of +117.

The high selling Angus bull was lot 19, consigned by Edgewood Angus of Williamsburg, Virginia. This September 2014 son of Sitz Upside 547W commanded $5900 from Joe Henshaw of Madison, Virginia. This bull posted ratios of 110, 108 and 114 for WW, test YW, and RE respectively. He also ranked in the top 1% for his YW EPD of +132.

The high station index Angus bull was consigned by Legacy at Pine Hill of Forest, Virginia. This Benfield Substance 8506 son sold for $5200 to Hollow Hill Farm of Doe Hill, Virginia. This September 2014 bull had a test YW of 1425, ratio 116 and test ADG of 5.80, ratio of 138, as well as YW EPD of +105, Milk EPD of +30 and $W of +61.

The high-sale index bull, lot 16, consigned by Silver Creek Angus of Danville, Virginia, commanded $5000 from Knight Cattle Corporation of Montpelier Station, Virginia. This Coneally Capitalist 028 son had the highest test YW ratio at 122, along with a test ADG ratio of 121. This October 2014 bull also posted EPDs of +62, +109 and +0.88 for WW, YW, and RE, respectively. Silver Creek Angus was also recognized as the Angus Breeder Group award winner for their consignment of six Angus bulls.

The strong Angus offering also included Lot 53, consigned by John Gundzik of Manchester, Maryland, which sold to J. L. Smith Farm of Charlottesville, Virginia for $5,000. This calving ease son of KCF Bennett Consensus Y99 had a CED EPD of +11, BW EPD of -1.4 and CEM EPD of +13. This Angus bull also posted a test IMF ratio of 165, along with a $B EPD value of +169. Another
Angus bull, lot 27 was consigned by Monomoy Farm of Warrenton, VA and sold to Holly Hill Farm of Mt. Sidney, VA for $5000. This Deer Valley All In son posted a +16 CED EPD, -1.0 BW EPD, +64 WW EPD, +117 YW EPD, +32 Milk EPD and a $W value of +84. Lot 21, consigned by Goforth Angus of East Bend, NC commanded $4750 from Daniel Flora of Grottoes, VA. This Koupals B&B Identity son posted a YW EPD of +116, DOC EPD of +19 and ratios of 111 and 110 for WW and test YW, respectively.

The strong group of Gelbvieh and Gelbvieh Balancer bulls was led by Lots 601 and 602 consigned by Little Windy Hill Farms of Max Meadows, Virginia. Lot 601 was a homozygous black, homozygous polled purebred Gelbvieh bull out of JKGF Future Investment X037 and sold to Belle Plaine Farm of Orange, VA for $4250. This bull posted a test ADG of 4.15, ratio 100 and scanned an adjusted REA of 14.6. Lot 602 was a September 2014 son of HYEK Black Impact and commanded $4000 from David Danner of Max Meadows, VA. This homozygous black, homozygous polled Gelbvieh Balancer bull posted a test YW ratio of 107, test ADG ratio of 106 and IMF scanned ratio of 111.

All bulls in the test and sale were consigned by members of the Virginia Beef Cattle Improvement Association. Bulls were tested at the Culpeper bull test station operated by Glenmary Farm, owned by Tom and Kim Nixon of Rapidan, Virginia. The sale was managed by Virginia BCIA and the Virginia Cattlemen’s Association, and the auctioneer was Mike Jones. Additional details on the Virginia BCIA Bull program can be found at http://bcia.apsc.vt.edu.
Ten Steps to Buying the Right Bull
Scott P. Greiner. Ph.D.
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With the spring bull sales just around the corner, now is the time to spend some time planning for those new purchases. From a genetic perspective, bull selection is the single most important decision for the cow-calf producer. This is underscored by the fact that the bull represents 50% of the genetics of the current calf crop, and 87.5% of the genetics of replacement heifers reflect bulls in her three-generation pedigree. Therefore, some prior thought along with some planning is warranted heading into bull buying season. The following outline provides some simple steps to establish a plan:

1) Examine Herd Goals- Herd goals serve as the foundation for sire selection and provide guidance as to traits with the most economic importance. Defining the production and marketing system, along with management strategies and environment are key factors.

2) Determine Herd Strengths and Weaknesses- Basic records are necessary to identify herd strengths and weaknesses. Performance parameters such as calving percentage, weaning percentage, weaning weights, sale weights, carcass merit, feed usage, etc. are necessary to serve as the basis for assessing areas of strength and those needing attention.

3) Establish Selection Priorities- Concentrate on those factors which stand to have the largest impact on profitability. Remember that income is derived from performance which is influenced by both genetics and environment/management. Focus on the handful of priority traits rather than attempting to change many traits simultaneously.

4) Utilize Selection Tools- Genetic differences across breeds have been well established, and utilization of different breeds in a complimentary fashion through structured crossbreeding plans provides the opportunity for improvement in multiple traits. Most importantly, heterosis attained through crossbreeding has been shown to have significant favorable impacts on traits such as reproductive efficiency and cow longevity which are critical for herd profitability. EPDs and indexes are available for many traits of economic importance. Again, with the large number of EPDs at our disposal, the critical step is to determine the EPDs which are most important and establish benchmarks relative to each.

5) Establish Benchmarks- Several tools can be utilized to assist in the determination of EPD specifications. EPD values for current and past sires can be used as benchmarks. With these benchmarks, EPD specifications can be set to reflect desired increase, moderation, or stabilization of performance for a particular trait.
6) Find Source- There are many sources of bulls that warrant consideration- production sales, test stations, and private treaty sales. Of critical importance is that the bull be from a reputable source and breeder which will stand behind their product.

7) Do Your Homework- Closely study the sale catalog, performance pedigree, and data. On paper, determine which bulls meet the EPD and other specifications that have been established and eliminate those which do not. Stay firm to the selection criteria and qualifications/specifications that have been established. All this can and should be accomplished prior to attending a bull sale.

8) Take a Look- Once the list has been narrowed to only bulls which meet the criteria, these bulls can be further evaluated and selection refined. Having a list of suitable bulls prior to arrival at the auction or farm will not only save time, but also assist in making sure the right bull for the situation is purchased. Upon narrowing the potential candidates on paper, the bulls can be evaluated for suitability of phenotypic traits and the potential candidate list shortened even further.

9) Make a Sound Investment- For many cow calf producers, purchasing a new bull is a relatively infrequent occurrence. This emphasizes the importance of selecting the right bull, particularly in single sire herds. The value of the right bull cannot be underestimated. Investments in good genetics will pay dividends both short and long-term through the influence the bull has on each calf crop as well as his daughters that are retained in the herd.

10) Proper Management- Lastly, proper management and nutrition are essential for the bull to perform satisfactorily during the breeding season. With most new herd sires purchased as yearling bulls- management prior to, during, and after the first breeding season is particularly important. Plan ahead by acquiring a new yearling bull at least 60 to 90 prior to the breeding season so that ample time is available to allow for adjustment to a new environment, commingling with other bulls, and getting the bull in proper breeding body condition.
An open house will be hosted at the Virginia Beef Cattle Improvement Association’s Southwest Virginia Bull Test on Sunday afternoon, March 20\textsuperscript{th} from 1:00 to 4:00 PM. Cattle producers and others interested are invited to attend. The Southwest Bull Test Station is located at Hillwinds Farm, owned and operated by Tim Sutphin of Dublin, Virginia. The station is located just outside Dublin. From Dublin, travel south on Route 11 just over two miles, and turn right on Thornspring Road/Rt. 643 (Cougar Express convenience store on corner). Proceed on Thornspring Road a little over a mile and the facility is on the left.

Approximately 150 bulls will sell at the Virginia BCIA Southwest Bull Test Sale on Saturday, March 26\textsuperscript{th}, 12:00 noon at the sale facility just outside Wytheville. These bulls will represent the top end of the 92 fall-born senior bulls and 132 spring-born junior bulls currently being developed. Breeds include Angus, Braunvieh, Charolais, Gelbvieh & Gelbvieh Balancers, Polled & Horned Hereford, Simmental and SimAngus. Only bulls which meet stringent BCIA criteria will sell. This includes complete breeding soundness exams (including semen evaluation) on fall-born bulls, volume buyer discounts, and an enhanced soundness and fertility guarantee on all bulls selling.

The BCIA-Influenced Bred Heifer Sale will be held in conjunction with the bull sale. A select group of approximately 40 fall-calving bred heifers from leading producers will be offered immediately following the bulls. All heifers will be certified through the Virginia Premium Assured Heifer Program, which verifies health, genetics, and management procedures. Service sires for the heifers will feature highly proven, AI sires selected for calving ease and performance.

For complete details and progress reports visit the Virginia BCIA website http://www.bcia.apsc.vt.edu or phone 540-231-2257. Video clips of the bulls and an online catalog will also be posted.
What is Changing with Antibiotic Use in Livestock?
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In the words of the Food and Drug Administration (FDA):
“Full implementation of FDA’s Guidance #213 [often called the Veterinary Feed Directive (VFD) law] in December 2016 will significantly change the way medically important antibiotics have been used in animal agriculture for decades. Once the changes are fully implemented, it will be illegal to use these medically important antibiotics for production purposes, and animal producers will need to obtain authorization from a licensed veterinarian to use them for prevention, control or treatment of a specifically identified disease.”

Which drugs?
The definition of drugs as “medically important to humans” has been made by the FDA. For most cattle producers the specific products whose use will be affected are neomycin, tylosin, chlortetracycline and oxytetracycline. While oxytetracycline injectable (for example, LA-200 and its relatives) will still be available to producers over-the-counter, obtaining feed-additive or water-additive products will require involvement of a veterinarian.

The VFD
While many injectable antibiotics require a “prescription” the document needed to obtain feed additive antibiotics is called a “Veterinary Feed Directive”. The document will need to be completed and signed by a veterinarian in order to dispense an antibiotic feed additive. If a feed mill or other retailer dispenses the antibiotic feed additive, they must have the VFD signed by the veterinarian.

The VCPR
Another aspect of the new regulation concerns the relationship a producer must have with a veterinarian in order to sign a VFD. The regulation requires that there exist a “Veterinary-Client-Patient Relationship” or VCPR. While this concept is not new, veterinarians who have dispensed drugs according to the “Extra-Label” rule have done so with a valid VCPR, this application of the regulation is new. In order for a valid VCPR to exist:
- The veterinarian must have assumed responsibility for the treatment of the animals
- The producer must have agreed to follow the veterinarian’s instructions
- The veterinarian must have sufficient knowledge of the patient to initiate at least a general or preliminary diagnosis of the medical condition of the patient by virtue of a timely examination of the patient by the veterinarian, or medically appropriate and timely visits by the veterinarian to the operation where the patient is managed.
- The veterinarian must be readily available for follow-up evaluation or have arranged for veterinary emergency coverage, and continuing care and treatment.
- The veterinarian must provide oversight of treatment, compliance, and outcome.
- The veterinarian and the producer must cooperate to be sure adequate records are maintained

Specifically, what changes will most affect Virginia cattle producers?

- Some products (water antibiotic treatments, for example) will no longer be available at feed stores and will need to be acquired from a veterinarian.
- A VFD from a veterinarian will be required for the purchase of antibiotics for feed (for example, antibiotic crumbles). VFD’s will be for specific groups of animals, for set time periods and with set expiration dates.
- Veterinarians will be careful to assure that a VCPR exists before writing a VFD as they will be closely scrutinized with the advent of the new regulation.
- The use of chlortetracycline and oxytetracycline products will change. With the new regulation, the use of tetracycline products to improve weight gain and feed efficiency will not be legal. Therefore, the only uses of these products will be for:
  - Control of shipping fever pneumonia (350 mg/hd/day)
  - Control of active infection of Anaplasmosis (350 mg/hd/day to cattle <700 lb.; 500 mg/hd/day to cattle >700 lb.)
  - Treatment of bacterial enteritis and bacterial pneumonia for no more than 5 days (10 mg/lb body weight)

- The use of medicated minerals containing tetracycline will change significantly. They will only be legal when used to treat one of the above conditions (shipping fever, anaplasmosis or bacterial enteritis) and at the above dosages. It is illegal to use oral products in an extra-label fashion so a veterinarian could not write a VFD for tetracycline in mineral to treat or prevent pinkeye, for example. VFD’s written for these medicated minerals will be for specific groups of animals, for set time periods and with set expiration dates. A VFD for tetracycline products will expire six months after its issue.

- There is ongoing discussion about veterinary relationships as they relate to state lines. Right now it appears that a veterinarian writing a VFD for feed or mineral being mixed or sold in Virginia will have to be licensed to practice in Virginia.

What won’t change?

- Ionophores in feed are not considered “medically important for humans” so monensin (Rumensin®) and lasalocid (Bovatec®) will still be freely available in feed products as they currently are.
- Over-the-counter injectable antibiotics that are available now will continue to be available. However, producers should note that a new law in California effective in 2018 will put all injectable antibiotics, including LA-200® and Penicillin, under veterinary prescription. Will this be the next federal directive?
Lambing Management Tips
Scott P. Greiner
Extension Animal Scientist, Virginia Tech

Lambing season is a very enjoyable time of year for many shepherds. Investment of time and sound management practices pay dividends for producers during lambing time. The profitability of a sheep operation is largely dependent upon maximizing the number of lambs marketed per ewe exposed, while minimizing costs of production. Since most lamb deaths occur at or shortly after birth, lambing time is critical. The three primary causes of death of lambs around lambing time are difficulty during the birthing process, starvation, and hypothermia. Management practices at lambing time are essential for the economic viability of the sheep operation.

Dystocia (lambing problems) has been shown to be a significant cause of lamb mortality. Losses due to stillbirths and dystocia can be reduced by frequent visits to the lambing barn and timely assistance of ewes. Pregnant ewes should be checked every 3-4 hours. Many shepherds do their last check at 11 p.m. or midnight and then again at 5 or 6 a.m. Ewes that will lamb between these times usually show signs at the late night observation. Ewes close to lambing will be restless and may try to claim other newborn lambs. Ewes in labor will normally separate themselves, and frequently choose a corner or area along a wall or feedbunk to nest and deliver. The lambing area should be dry and well bedded, and sources of cold drafts that will chill newborn lambs should be eliminated. It is not necessary to have a heated lambing barn - a dry, draft-free area is more important. The lambing process can vary considerably between ewes. Ewes in labor should be left undisturbed. However, once the ewe begins forceful straining and the water bags are passed, delivery should normally take place within 45-60 minutes. Once the front legs are visible, lambs should be born within 30-45 minutes. After the first lamb is born, subsequent lambs are normally delivered within 30 minutes. Prolonged delivery beyond these times may indicate lambing difficulty, and the ewe should be examined and assisted if necessary. Prior to assisting the ewe, the examiner should wash the ewe’s vulva with mild soap and water. Likewise, the shepherd should thoroughly wash their hands and arms and wear an OB sleeve when assisting or examining a ewe. When assistance is required to deliver one lamb, the uterus should be examined for additional lambs. For lambs that are pulled, a piece of straw may be gently inserted into the nostril as an irritant to help stimulate breathing.

When possible, ewes should be allowed to give birth where they initially bed down. Moving ewes to individual pens when they start lambing may prolong the birthing process and cause other complications. Additionally, allowing ewes to complete the lambing process before moving them to jugs will keep the jugs drier and help prevent injury to lambs in multiple birth situations. Lambing jugs should measure at least 5 ft. x 5 ft., with a maximum slat spacing of 3 in. Large breeds and multiple births may require larger jugs. The environment of the jug is critical to newborn lamb health and survival. The jugs should be kept well bedded, dry, and free of drafts. For facilities with cement floors, a base of lime or sawdust/shavings is
recommended under straw. Cement floors can be cold and damp, and therefore a source of chilling and pneumonia in newborn lambs. When feasible, lambing jugs should be cleaned between ewes.

The first 24-48 hours after birth are a critical time for the ewe and her lambs. During this time, bonding occurs between the ewe and her lambs. The jugs also assist the shepherd in keeping a close eye on the ewe and lambs during this time. Upon moving the ewe into the jug, the lambs’ navels should be immersed in a 7% iodine solution. Iodine helps prevent infection and promotes drying of the navel.

Colostrum is the milk produced by the ewe up to 18 hours after birth. It has important nutritional value for the newborn lamb. Colostrum also contains essential antibodies that provide protection against certain diseases for the newborn lamb, and provides energy to keep the lamb warm. Newborn lambs are susceptible to hypothermia due to their large body surface area in relation to body weight, and relatively low energy reserves.

Lambs should receive adequate intakes of colostrum within 30-60 minutes after birth. To help insure this, the ewe’s teats should be stripped to remove the wax plugs that frequently obstruct the teat. In some cases, lambs that appear to be nursing may not be getting milk due to these plugs. Stripping the teats will also confirm the ewe has milk. Lambs should be monitored closely to make sure they nurse. Lambs that have nursed will have a full stomach upon palpation. Crutching ewes prior to lambing will enhance the lamb’s ability to access the udder, particularly with long-fleeced ewes. Lambs that have not nursed should be assisted. Most lambs have a strong suckling reflex shortly after birth, and will nurse when presented a teat. It may be necessary to close the lamb’s mouth on the teat and/or squirt milk in the lamb’s mouth to initiate suckling. An effort should be made to help the lamb nurse the ewe before other methods are used to get colostrum into the lamb.

In some cases, the lamb is unable to nurse the ewe even with assistance. These lambs may be small, weak, chilled, rejected by the ewe, or injured. In these cases, stomach tube feeding is necessary to get colostrum into the lamb. Lamb stomach tubes that attach to syringes are available commercially, and should be on hand for all shepherds. For lambs that require tubing, start with 2-4 oz. the first feeding (30 cc equals ~1 oz.). Many times, this first feeding will energize weak or chilled lambs, and they will respond and be able to nurse on their own thereafter. If not, the lamb may require an additional tube feed an hour or two later. As a guideline, a 10-pound lamb needs approximately 16 oz. of colostrum the first 24 hours of life.

Virginia is largely a Selenium deficient state. Deficiency of Selenium and/or Vitamin E causes white muscle disease in lambs. For prevention of this disease and all-around flock health and performance, the ewe flock should be provided a high-selenium complete mineral mix specifically formulated for sheep during gestation (fed free-choice). Additionally, lambs should receive supplemental Vitamin E and Selenium in the first few days after birth.