

Virginia Cooperative Extension

A partnership of Virginia Tech and Virginia State University



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Livestock Update

Beef - Horse - Poultry - Sheep - Swine

January 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

JANUARY

26 Virginia Tech Beef Cattle Health Conference. Blacksburg. **Contact:**
Ralph Roop, (540) 231-7344; email: reroop@vt.edu

FEBRUARY

1 Virginia Beef Convention. Hotel Roanoke. **Contact:** Jason Carter, (540) 992-1009;
email: jcarter@vacattlemen.org

MARCH

17 Virginia BCIA Southwest Bull Test Open House. Hillwinds Farm. Dublin. **Contact:** Scott Greiner,
(540) 231-9159; email: sgreiner@vt.edu
23 Virginia BCIA Southwest Bull Test Sale. Umberger Facility. Wytheville. **Contact:** Scott Greiner,
(540) 231-9159; email: sgreiner@vt.edu

HORSE

MARCH

22-24 EquiSmartz State Educational Weekend. VHC. Lexington. **Contacts:** Celeste Crisman,
(540) 231-9162; email: ccrisman@vt.edu or Jessica Tussing, (540) 231-6345; email:
jessit07@vt.edu

February Herd Management Advisor

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

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 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 to comply with age and source verification requirements. 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

- Make plans for spring bull-buying season. Evaluate current herd bulls for progeny performance and soundness. Establish herd genetic goals, and selection criteria for AI sires and new herd bulls. Order semen.
- 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 2 lbs 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.

Bull Buying- Have a Game Plan

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

Have a game plan heading into bull buying season. Evaluate the current herd sire battery for their physical and reproductive soundness, as well as the performance of their progeny. With the spring bull sales just around the corner, now is the time to spend some time planning for those new purchases. The following outline provides some coaching suggestions to establish your game 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.

2013 Southwest Bull Test: Sale, Open House, & Bred Heifer Sale

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

An open house will be hosted at the Virginia Beef Cattle Improvement Association's Southwest Virginia Bull Test on Sunday afternoon, March 17th 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.

A total of 211 bulls are currently on test at Hillwinds Farm, including 99 fall-born senior bulls and 112 spring-born junior bulls. Breeds include Angus, Charolais, Gelbvieh, Gelbvieh Balancer, Polled Hereford, Simmental, and SimmAngus. The top end of these bulls will be sold on Saturday, March 23rd at 12:00 noon. The sale will be held at the Umberger sale facility, just outside Wytheville. 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.

Flock Nutritional Strategies

Dr. Mark A. McCann
Extension Animal Scientist, VA Tech

Feeding the flock is the largest cash cost associated with sheep production. Beyond the cost side of the balance sheet, nutrition also plays a key role in factors affecting income such as number of lambs born, lamb vigor and survival, milk production and lamb growth. Balancing costs with production benefits is the key to formulating an economical nutritional strategy for your flock.

Managing factors which impact income

The ewe's annual production cycle can be divided into five periods: flushing, early gestation, late gestation, lactation, and maintenance. Of these, late gestation and lactation are the two most critical and costly periods of feeding the ewe. The last 30-45d of gestation and first 45d of lactation generally require supplementation (Table 1) to meet nutritional needs. This is especially true for ewes with twins.

Inadequate nutrition during late gestation can cause numerous problems such as:

- A higher percentage of ewes with pregnancy disease
- A decrease in birth weights
- Weaker lambs at birth
- An increase in infant lamb mortality
- Slower gaining lambs
- Lower milk yields during lactation

Underfeeding during lactation will reduce ewe milk production and body condition. The decline in milk production will negatively impact lamb growth and vigor. The ewe's requirements for protein and energy are at their highest during this period and the requirements increase with the number of lambs.

Flushing is a short period of time prior to and the onset of breeding where energy is supplemented to increase ovulation rate. Most research would indicate that this is only effective and economical when ewes are in a thin body condition.

The maintenance of ewes is their lowest nutritional requirement for both protein and energy. During maintenance and early gestation are the easiest times to increase the body condition of thin ewes with the use of good quality forages.

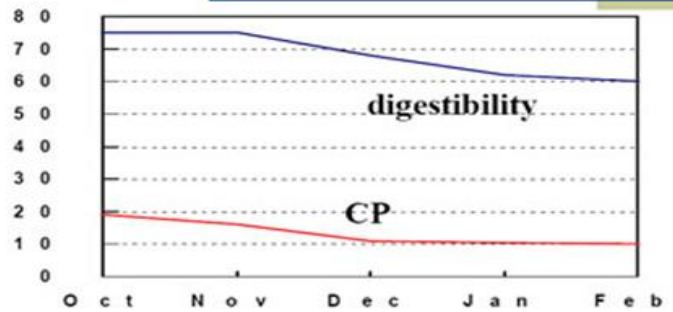
Managing factors which impact costs

One key to managing costs is minimizing use of stored forages and grain. This is not to eliminate their use but rather emphasize being efficient and economical in when and how much to feed. A few factors to keep in mind are:

1. Many times it is less expensive to purchase hay than to produce yourself. This is common in small farm flocks but should be considered for larger flocks as well.
2. Not all hay is created equal. Forage testing for nutritive analysis will identify the better quality hay that needs to be fed during the periods of highest nutritive need. The analysis will also allow supplementation decisions to balance specifically what the hay is deficient in (energy, protein or both).
3. Sheep are especially adept at being selective in their hay consumption. To minimize waste, store hay inside and use round bale feeders.

The best way to keep hay and feed costs to a minimum is a solid pasture and grazing management strategy. Matching flock nutritional needs to your forage program are critical. That would suggest that the period of greatest nutritional need (lactation) would be best set to coincide with spring grass in late March and April. Forage at this time is highest in digestibility and protein content. A lactating ewe with twins would only need supplemental energy to meet her nutritional requirements. As cool season grasses begin to mature in mid to late May, ewes would be well past their peak nutritional needs which occurs about at three weeks into lactation.

Quality of Stockpiled Tall Fescue



Ross and Reynolds, 1979

which occurs about at three weeks into lactation.

A crucial forage management related item which impacts flock nutrition and forage productivity is the frost seeding of clovers into pasture in February. The addition of clovers to pastures accomplishes two goals. The first being that clovers are generally more digestible and higher in protein than grasses and they are also effective in diluting infected tall fescue. Clovers are legumes which fix nitrogen in the soil. Nitrogen is “fixed” in clovers through a symbiotic relationship with rhizobium bacteria that infect roots. The plant provides energy for the bacteria and bacteria provide the “machinery” necessary to convert atmospheric nitrogen to a form available to plants. Most people picture a ‘conduit’ that transports nitrogen directly from clover to grass. Unfortunately, almost no nitrogen is contributed in this mode. Essentially, nitrogen is supplied to grasses indirectly via the decomposition of the clover root nodules. Nitrogen must then be converted into a form available to plants. This conversion or ‘mineralization’ releases nitrogen slowly- more similar to a time release fertilizer than an application of ammonium nitrate or urea. Given the high cost of fertilizer, clovers are an economical way to supply nitrogen to your grass pasture. After perennial clovers are well established, nitrogen will be released to grasses at a relatively constant rate as nodules decompose. White clover can fix 50-125 pounds of nitrogen per year and red clover can fix 75-150 pounds depending on stand, soil and growing conditions. At current urea prices this practice can translate to \$30-\$90 per acre in added nitrogen on an annual basis.

Stockpiling tall fescue pastures in the fall is an economical method to carry forage quantity and quality beyond the growing season into late fall and winter. A portion of pasture is set aside and fertilized with 40-60lb of N in mid to late August. Grass growth is allowed to accumulate for later grazing. The quality of stockpiled forage will persist through much of the winter.

Grazing management is a key component to getting the most from your stockpiling investment. Giving sheep access to large areas of stockpiled forage can result in trampling losses and reduced efficiency of harvesting available dry matter. By rationing or limiting access to stockpiled areas such as with strip grazing forage utilization will be improved and grazing days extended. More time and management expense is substituted for winter feed costs.

Table 1. Forage Quality and Supplementation (176 lb ewe)¹

Forage Analysis		Early ² Gestation		Late ³ Gestation		Early ⁴ Lactation		Late ⁵ Lactation	
CP % of DM	TDN % of DM	Lbs SBM	Lbs Corn	Lbs SBM	Lbs Corn	Lbs SBM	Lbs Corn	Lbs SBM	Lbs Corn
11.2 & over	56 & over	-	-	-	.75	.5	2.5	.3	1.5
9.5 - 11.1	56 & over	-	-	.15	.75	.8	2.5	.45	1.5
	53 - 56	-	-	.15	.85	.8	2.7	.45	1.65
	50 - 53	-	-	.15	1.0	.8	2.9	.45	1.80
8.2 - 9.5	54 - 56	-	-	.25	.8	1.0	2.5	.55	1.5
	51 - 54	-	.2	.25	1.0	1.0	2.75	.55	1.75
	50 & under	-	.4	.25	1.2	1.0	3.0	.55	2.0
7.3 - 8.2	53 - 55	.1	-	.4	.8	1.1	2.5	.6	1.5
	51 - 53	.1	.2	.4	1.0	1.1	2.75	.6	1.75
	50 & under	.1	.4	.4	1.2	1.1	3.0	.6	2.0
Under 7.3	Under 48	.2 - .3	.5 - 1.0	.4 - .5	1 - 1.5	1.2 - 1.5	2.5 - 3.5	.7 - .8	2.0 - 3.0

¹ Recommendations are made on basis of 44% soybean meal and ground shelled corn. Other supplements can be used to deliver the same amount of energy and protein.

² Dry ewes in the first 15 weeks

³ Last 4 weeks of pregnancy (200% lambing rate expected)

⁴ First 6-8 weeks of lactation suckling twins

⁵ Last 4- 6 weeks suckling twins