

Livestock Update

Beef - Horse - Poultry - Sheep - Swine

February 2011

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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www.ext.vt.edu

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Dates to Remember

BEEF

FEBRUARY

10-11 VA Beef Industry Convention. Hotel Roanoke. **Contact:** Bill McKinnon, (540) 992-1009, email: bmckinnon@vacattlemen.org

MARCH

20 VA BCIA SW Bull Test Open House. Dublin. **Contact:** Scott Greiner, (540) 231-9163, email: sgreiner@vt.edu

26 VA BCIA SW Bull Test & Bred Heifer Sale. Wytheville. **Contact:** Scott Greiner, (540) 231-9163, email: sgreiner@vt.edu

APRIL

15-17 VA Beef Expo. Rockingham County Fairgrounds. Harrisonburg. **Contact:** Bill McKinnon, (540) 992-1009, email: bmckinnon@vacattlemen.org

GENERAL

FEBRUARY

18 Block & Bridle Hippology Contest. Alphin-Stuart Arena. Blacksburg.

Contact: Julia McCann, (540) 231-7384, email: jsmccann@vt.edu

19 Block & Bridle Horse Judging Contest. Alphin-Stuart Arena. Blacksburg.

Contact: Julia McCann, (540) 231-7384, email: jsmccann@vt.edu

MARCH

25-26 Block and Bridle Stockman's, Meats and Livestock Judging Contests.

Contact: Mark Wahlberg, (540) 231-9161, email: wahlberg@vt.edu

APRIL

8-10 State 4-H/FFA Horse Judging & 4-H Hippology, Horse Bowl and Presentations. Virginia Horse Center. Lexington. **Contacts:** Celeste Crisman, (540) 231-9162, email: ccrisman@vt.edu or Joi Saville, (540) 231-2257, email: joi.saville@vt.edu

SWINE

FEBRUARY

26 Youth Swine Day. VA Tech. Blacksburg. **Contact:** Cindy Wood, (540) 231-6937, email: piglady@vt.edu

February Beef Management Calendar

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

Spring Calving Herds

- Have all calving supplies on hand and review calving assistance procedures
- Move pregnant heifers and early calving cows to calving area about 2 weeks before due date
- Check cows 3 to 4 times per day during calving season, heifers more often to assist early if needed
- Keep calving area clean and well drained, move healthy pairs out to large pastures 3 days after calving
- Ear tag and dehorn all calves at birth; castrate male calves in commercial herds
- Give selenium and vitamin A & D injections to newborn calves
- Late gestation mature cows should gain 1.0 lbs per day
- Target gain for pregnant heifers and 3-yr olds should be 2.0-2.5 lbs per day
- Keep high quality, high magnesium mineral available
- Vaccinate cows against scours if it has been a problem
- Evaluate herd genetic goals and assess bull battery, make plans to attend spring bull sales and/or order AI semen
- Frost seed clovers (mid to late in the month)

Fall Calving Herds

- End breeding season early in the month
- Remove bulls and check condition
- Begin creep feeding or creep grazing calves if desired
- Plan marketing strategy for calves
- Begin feeding high magnesium minerals to prevent grass tetany
- Continue to check calves closely for health issues
- Frost seed clovers (mid to late in the month)

Playing the Cards You're Dealt

Dr. Mark A. McCann

Extension Animal Scientist, VA Tech

Cattlemen who calve heifers before their spring calving cows have either tagged the first calves or are checking their calving supply checklist. The opportunity and time for good pre-calving management intentions are quickly moving to the category of should have done.... Regardless of your success in doing things better this winter, it is now important to evaluate the condition of your herd as they begin calving this spring.

Body condition at calving has long been the best barometer of projecting post-partum return to estrus and success of conception in a controlled breeding season. While it is too late to make adjustments in body condition; it is the right time to evaluate the status of your cow herd and formulate a plan for a successful breeding season. Identify cows that are below condition score five and try to manage them with young cows (2 and 3 year olds). In general this group of females will require about 10% more energy at the same level of intake. For example if your hay has been tested to contain 56% TDN (which is fairly close to what a mature cow at average milk production would require), the TDN requirements for a 2yr old cow would be closer to 61-62%. Protein needs are not greatly different, so the critical point to address is the additional energy need of these young cows.

Be aware that during the last 30 days of gestation there is a significant increase in nutrient needs. While nutrient demand is not as high as lactation, the nutrient needs for the last 30 days of gestation increase by about 7% for TDN (10.9 vs 11.7 lbs/d TDN for a 1200 lb cow) and from about 1.6 lbs/hd/d to 1.8 lb/hd/d for CP. The take home message in regard to this change is that in most instances supplementation should make an intermediate increase during the last 30 days of gestation. This will prevent any body condition decrease during this last 30d and conditions cows to come up and be checked on a regular basis as you enter into the calving season.

Separate and manage the young and or thinner cows separately. There is not a way to manage these young or thin cows with the rest of herd and successfully meet their energy needs without over feeding the majority of the cow herd. Remember that energy (TDN) is the more critical nutrient, so as you shop for potential supplements to meet their requirements, price compare on a TDN basis. In today's market place, by-product feeds such as corn gluten maybe more economical than corn and will also supply additional protein.

It is not too late to forage test you hay. Earlier comments about meeting nutrient requirements and planning for supplements revolve around the knowledge of the nutrient content of the forage you are feeding. The next 30-60 days of winter feeding for these spring calvers is well worth the effort to test your hay. Once identified, you can feed the better quality hay to the young and thin cows. You will also have a more accurate picture of your supplementation needs for all cows.

Hopefully following these couple of steps will allow you to make some key decisions and management steps for a successful spring calving and breeding season.

Preventing Scours in the Upcoming Calving Season

Dr. W. Dee Whittier

Extension Veterinarian, Cattle

VA-MD Regional College of Veterinary Medicine, VA Tech

With the upcoming calving season the threat of calf scours should always be given some consideration. Calf scours is the condition that baby calves in the first month of life deal with when they get a severe case of diarrhea that may be life-threatening. It is an infectious disease that may be caused by one or more of viruses, bacteria and tiny parasites.

For a number of years the approach to calf scours control was centered on the bugs that were identified as being involved in their cause. E. coli bacteria, Rota and corona viruses, cryptosporidia and others were all identified. Vaccines against the bugs and antibiotics to treat them were often at the center of control programs. Despite all this good science, results of these approaches were sometimes disappointing.

Finally, a group of scientists in a bit of a new field had a look at calf scours. These scientists belong to a field called epidemiology. This is the study of disease patterns. Prior to these studies, the thought tended to be that scours occurred on a farm because it was unlucky enough to have the scours-causing bug land on their farm.

When a group of researchers at Washington State University did a detailed study on calf scours they discovered a very interesting thing. When they looked hard enough, they found that nearly every farm had many or all of the scours causing organisms. Some of these farms had severe scours problems while others had none.

This finding caused the main researcher, Dr. Dale Hancock to make the following statement, "Saying that calves have scours and that cryptosporidia is the cause is like saying that the barn burned down, and oxygen was the cause." Of course, the barn wouldn't have burned if there had been no oxygen, but what were the odds of that? It can also be said that if the wind is blowing to provide additional oxygen, it will speed up the burning of the barn.

So if being unlucky enough to get the scours bugs on a particular farm isn't the big cause of scours, what is? Many factors have been studied but several important ones include: 1) the age at which a calf gets exposed to scours agents; 2) whether the calf has had enough colostrum or not; 3) whether calves are getting enough nutrition; 4) the dose of exposure to the disease agents; 5) a healthy immune system for the calf due to having had good nutrition during gestation; and, 6) other stresses on calves such as wet or cold.

A very important concept has emerged from this line of research. The concept involves the pattern of transmission of the scours organisms to the calves. Many of the agents are probably present in most every cow herd. But since the cows are very immune to these bugs, the numbers that are being passed by the cows are very small. This means that, at the beginning of the calving season, the calves don't get infected until they are several days to weeks old.

These older calves may not be noticed to have scours at all as their case is very mild. But they begin to shed organisms in much bigger numbers into the environment. These bugs then get to calves that are born later in increasing number and at ever earlier ages. The next round of calves may just get dirty tails and be a little depressed.

As the process proceeds scours causing organisms build up in great numbers. Many calves with diarrhea now badly contaminate the calving area. Cows that are ready to calve may get the diarrhea fluids on their teats so that their newborn calves get a huge dose of organisms into their mouths within minutes of birth. This huge dose at a very early age results in calves that get so sick that they may die quickly without aggressive treatment.

Three major approaches to dealing with this scours scenario should be applied:

1. Move cows that have not calved into a separate calving pasture. An intensive version of this is called the Sandhills calving system. This Nebraska system is designed for large herds of cows and involves moving uncalved cows out every few days. Eventually the old calves are mixed with the next older group(s) so that a large number of pasture and feeding groups stays manageable. But even splitting the herd once can be very helpful in breaking the scours organism build up pattern.
2. Practice sanitation in the calving pasture. Rolling out hay in a different location every day moves cattle around so that calves and cow's udders spend more time in uncontaminated areas. This delays the time it takes for calves to get infected and lowers the dose of disease-causing organisms that they consume. While calving cows in barns may be a necessity to prevent exposure when it is really cold, calving outside nearly always results in less exposure to disease organisms.
3. Have good health management systems in place to keep calf immunity as high as possible. Working to be sure all calves get a good feeding of colostrum is especially crucial.

In time of high calf prices, spending extra effort to avoid losses due to scours is especially cost-effective.

Bull Selection: Establishing Benchmarks

Dr. Scott P. Greiner

Extension Animal Scientist, VA Tech

Expected Progeny Differences have proven to be the most effective tool for genetic improvement of beef cattle. The majority of the genetic progress within a beef herd is accomplished through sire selection, and therefore EPDs play a primary role in identifying and purchasing bulls.

Advancements in science and technology have resulted in a large number of EPDs being developed for multiple traits. Producers are faced with two particular challenges as a result: 1) Which EPDs should I focus my selection on? and 2) What should be the target value of the EPDs of importance?

Once selection criteria have been established (ie. what traits do we need to improve?), benchmarks or an acceptable range of EPDs should be established for application to bull-buying. For example, if the goal is to increase weaning weight of the calf crop, WW EPD would be defined as a primary EPD selection criteria for a new bull. The questions become: What WW EPD does the bull ideally need to have? Is there a minimum? or maximum? In most situations, there is likely a range in EPD values that would be considered optimum. The adage that “more is better” is often not applicable in most selection scenarios when it comes to EPDs. Higher WW EPDs would certainly achieve the goal of enhancing weaning weights; however, there may also be correlated reductions in calving ease due to higher birth weights or potential increases in mature cow size for heifers retained as replacements. Balanced trait selection is always important and defining an optimum EPD range as a benchmark is compatible with this strategy.

Defining the optimum EPD range or benchmark, however, can be challenging. Knowledge of the EPD value of former and current sires in the herd can provide valuable insight and assistance in this matter. Associating EPD values on current/former sires with the performance of their progeny can be useful to establish a benchmark from which to select future sires. In the previous example, where enhanced weaning weights was a goal, it would be advantageous to know the WW EPD values of current sires. We could then set our WW EPD goal accordingly higher. Similar examples can be applied to milk, calving ease, and carcass traits. The basic premise is that defining where we are headed genetically is much easier if we can characterize where we have been.

Breed percentile rankings are additional tools that can assist with EPD selection. It is useful to understand where a particular bull ranks within a breed for traits of interest. This ranking will give a general idea as to the genetic merit of the bull compared to others within the breed. Percentile rankings are readily available in sire summaries published by breed associations. With this information, bulls can be specifically evaluated as to where their EPDs rank relative to all animals in the breed for specific traits. The following table provides a brief summary of percentile rankings in Angus and Purebred Simmental bulls for calving ease, yearling weight, milk, and marbling EPDs. It is important to note that percentile rankings do not reflect genetic differences for traits between breeds, and can be utilized on a within-breed basis. Utilizing the percentile table, it can be determined that an Angus bull with a Calving Ease EPD of +8 or higher ranks in the upper 25% of the breed for calving ease, and would be a strong candidate for use on heifers. Similarly, a Simmental bull with a milk EPD of +5 is slightly higher than the Simmental breed average for milk. These percentile rankings also illustrate practical differences between EPDs. In other words, differences of a couple of pounds of WW or YW EPD between bulls are rather insignificant in the

grand scheme of selection, as examination of the percentile rankings for these differences reveal that these bulls would essentially rank identically within the breed. A two pound difference in birth weight, however, is a substantial difference.

Percentile Rankings for Angus and Purebred Simmental Bulls

	ANGUS				Simmental			
Percentile Rank	CE	YW	Milk	MB	CE	YW	Milk	MB
10%	+10	+100	+27	+.64	+11	+73	+10	+.29
25%	+8	+92	+25	+.48	+9	+65	+7	+.21
50% (breed avg)	+6	+84	+22	+.33	+7	+56	+4	+.13
75%	+3	+74	+19	+.19	+5	+47	+2	+.05
90%	+0	+64	+15	+.08	+3	+39	-1	-.02

In summary, EPDs are a powerful selection tool and establishment of herd goals and benchmarks are important for optimal utilization. Tracking performance of progeny and percentile ranks are two mechanisms that assist in the establishment of benchmarks to be applied to bull-buying decisions.

Beef Webinar Focuses on Sound Financial Management for Cattlemen

February 15th, 6:30 p.m.

Dr. Mark A. McCann

Extension Animal Scientist, VA Tech



Dr. Alex White, Instructor, Dept. of Applied and Agricultural Economics at Virginia Tech, will be the featured speaker for the Beef Webinar sponsored by Virginia Cooperative Extension and scheduled for 6:30 p.m., Tuesday, February 15th. Dr. White is an Ag Economist, nationally recognized for his expertise in financial management and finance. Closer to home, Dr. White is a very popular teacher noted for his engaging classes and real world problem solving examples.

Dr. White will be providing a discussion of “**Sound Financial Management for Cattlemen**” with a focus on how producers can begin or improve their financial management practices for 2011. Participants in the on-line meeting will have the opportunity to ask questions through an on-line chat box or over the telephone using a number provided during the program. Check with your Extension Agent about accessing the program at your local office. Producers with high speed internet service can access the meeting at home. The web address to join the meeting is <http://connect.extension.iastate.edu/beefcattlewebinar/>. Alternatively, webinar information and meeting links are also available on the VT Beef Extension webpage <http://www.vtbeef.apsc.vt.edu/>. From the VT Beef Extension site, you can click on the meeting link and go directly to the meeting. A recording of the January Beef Webinar can also be accessed through the VT Beef Extension page. The final webinar is scheduled for March 15th and will focus on profitable forage management. If you have questions please contact Mark McCann at 540-231-9153.

2011 Southwest Bull Test: Sale, Open House, and 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 20th 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 171 bulls are currently on test at Hillwinds Farm, including 67 fall-born senior bulls and 104 spring-born junior bulls. Breeds include Angus, Charolais, Gelbvieh, Gelbvieh Balancer, Polled Hereford, Simmental, and SimmAngus. The top two-thirds of these bulls will be sold on Saturday, March 26th 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. BCIA has made some significant changes to the program which has been brought about through feedback from commercial bull buyers. Highlights include 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.

Complete information can be found on the VA BCIA website <http://www.bcia.apsc.vt.edu>, or phone 540/231-9163.

Expansion Decisions for the Part-Time Sheep Producer

Tom Stanley, Virginia Cooperative Extension- Farm Business Management
Scott Greiner, Extension Animal Scientist, VA Tech

Prices for market lambs in the fall of 2010 reached historic highs. Total numbers of sheep in the U.S. have been in decline for some 50 years while the population of ethnic minorities that prefer fresh lamb has been on the rise. In particular, immigrants from Africa and southern Asia have traditions and beliefs about how lamb should be prepared and consumed that result in their need for fresh domestically-produced lamb, mutton, and chevon (goat meat).

Most of the sheep and goats in the Mid Atlantic region are held in small flocks of under 70 ewes. These are part-time enterprises that fulfill lifestyle goals as well as providing supplemental income. The historically high prices received for lambs has prompted many people to consider either expanding existing flocks or starting new flocks of sheep.

There are a wide range of issues that warrant consideration when planning to expand an existing sheep flock. Labor requirement, feed requirements, animal performance, and financing costs are the categories that perhaps come closest to encompassing all the challenges that must be addressed to successfully expand a sheep production enterprise. This paper attempts to illustrate how changes in these four categories of expenses can change in the course of a flock expansion and describe how net income may be affected.

Table 1 summarizes the results of an enterprise budget analysis for a spring-lambing ewe flock that currently has 25 ewes and relies of stockpiled fescue for much of its winter forage supply. The columns show the changes in net income when the flock size is doubled to 50 ewes and one of the categories of labor requirements, feed requirements, animal performance, or financing cost is changed. **The analysis summarized in Table 1 looks at each of these changes in isolation, holding the other factors constant in order to illustrate the relative magnitude of impact of a particular change. In reality, there are numerous interactions that would likely result in several of these factors changing simultaneously if the 25-ewe flock expanded to 50.** For example, if the number of days hay must be fed increases, it is highly likely that the labor requirement would increase as well.

The enterprise budget used for this analysis is adapted and customized from the Farm Business Management Enterprise budget for sheep production available from Virginia Cooperative Extension at: <http://www.pubs.ext.vt.edu/category/enterprise-budgets.html>.

Columns 1 and 2 serve to provide a baseline of the potential impact on net income of an expansion from 25 to 50 ewes. If the flock could be expanded from 25 to 50 ewes without increasing labor required or changing the factors in the other columns, the 50 ewe flock very nearly reaches the goal of returning \$10 per hour for the shepherd's time and paying 5% interest on expenses and the flock's value.

Column 3 illustrates how changes in labor efficiency impact income relative to the time the sheep require. Feeding and handling facilities, pasture management and supplemental feeding systems all

impact labor efficiency. Moving from 25 ewes to 50 ewes could demand significantly more labor if basic facilities needs are not met.

Table 1. Economic Impact of Various Factors During Sheep Flock Expansion From 25 to 50 Ewes

	1	2	3	4	5	6
Item Changed (underlined in its respective column)	Current existing flock of 25 ewes	No change except add 25 ewes	Increased Labor/Week	Increase days of Hay feeding	Decrease Animal Health/Performance	Finance \$5,000 over 5 years
No. Ewes	25	50	50	50	50	50
% Death Loss	10	10	10	10	<u>15</u>	10
% Unthrifty Lambs	10	10	10	10	<u>20</u>	10
Days of Hay Feeding	63	63	63	<u>122</u>	63	63
Labor = Hrs per Week	6	6	<u>10</u>	6	6	6
Interest/Finance Charge	\$369	\$768	\$768	\$823	\$768	<u>\$1,987</u>
Income Relative to Goal*	-\$1,402	-\$278	-\$2,358	-\$1,425	-\$1,229	-\$1,498
NET CASH INCOME	\$1,868	\$3,172	\$3,172	\$2,080	\$2,216	\$1,953
CASH INCOME per HOUR (includes interest on expenses and the flock value)	\$5.99	\$10.17	\$6.10	\$6.67	\$7.10	\$6.26
*Enterprise Budget lists labor at \$10 per hour <u>and</u> 5% interest on all expenses and the value of the ewes. The 'Goal' being to capture sufficient revenue to cover all cash expenses, 5% interest on total cash expenses and the value of the breeding flock inventory, and \$10 for each hour of labor.						

Column 4 and 5 illustrate changes in income if an expansion from 25 to 50 ewes necessitated significant changes in feed requirement or animal performance. Expanding flock size can lead to shortfalls in available pasture or increased internal parasite loads both of which reduce income.

Column 6 attempts to illustrate a circumstance where the income from the additional sheep must finance some aspect of the expansion (animals, equipment, facility improvements etc.). In this example, \$5,000 is amortized over 5 years at a 7% interest rate and the entire loan payment (principle and interest) is assigned to the cash expenses. Normally, only interest on the loan would be assigned to expenses but here, the intention is to illustrate how much cash the shepherd realizes for her efforts. Keep in mind, once the loan is paid, then income in this example will go up by \$1,219 and the operation will still enjoy the benefit of the asset.

To reiterate, the reality of a flock expansion means that a number of management demands and changes in income and expenses will interact to hopefully result in increased net income. The examples presented here illustrate that feed costs and animal performance are critical elements to manage in the course of an expansion of a sheep or goat flock.



4th Annual Youth Swine Education Day

Dr. Cindy Wood and Ashley Kyle, APSC



Tentative Schedule
February 26, 2011

9:00 am	Registration	12:15 pm	Lunch (included in registration)
9:30 am	General Swine Information		Review Stockman's Contest
	- Picking Out Show Pigs	1:15 pm	Youth PQA-Plus Certification
	- Youth Sow Projects		-----
	- Feeding Show Pigs		Adult PQA Plus Certification
10:50 am	Break		or
11:00 am	Stockman's Contest		Adult Session in Meat Center
		3:30 pm	Awards

Program Registration

Contact Person: _____ E-mail address: _____

Mailing Address: _____ Telephone: _____

Number of youth _____ Number of adults attending Adult PQA Plus session* _____

Number of adults attending Meat Center session _____

Please include \$7.00 per person payment with registration. Total included: _____

Please make checks payable to: **VA Tech Foundation.** Write Youth Swine Day in the memo line.

Deadline for registration: February 11, 2011

Please complete the attached spreadsheet for all youth participants and return it by mail or e-mail to Ashley Kyle (akyle@vt.edu)

Mailing address: Youth Swine Education Day
c/o Ashley Kyle
3060 Litton Reaves (0306)
Blacksburg, VA 24061

***Adults are only required to recertify on PQA Plus every three years.**

*****Note: Adults will be responsible for transporting youth to afternoon sessions, as well as providing transportation to the Virginia Tech Meats Center (located on Washington Street near the Litton Reaves building where youth will need to go).**

4th Annual Youth Swine Education Day Registration Form*					
Name	DOB	Street Address	City, State, Zip Code	Telephone	E-mail address

*Information needed for Youth PQA-Plus Certification.