Virginia Cooperative Extension

A partnership of Virginia Tech and Virginia State University

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College of Agriculture and Life Sciences

VIRGINIA STATE

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Livestock Update

Beef - Horse - Poultry - Sheep - Swine

September 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.

IN THIS ISSUE:

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

Dates to Remember

BEEF

OCTOBER

28 17th Annual Hokie Harvest Sale. Beef Cattle Center/Livestock Judging Pavilion. Blacksburg.
Contact: Dan Eversole, (540) 231-4738, email: deversol@vt.edu

DECEMBER

10 VA BCIA Culpeper Bull Sale, Culpeper Ag Enterprises, Culpeper.
Contact: Scott Greiner. (540) 231-9159, email: sgreiner@vt.edu

HORSE

OCTOBER

8-9 Virginia 4-H State Fair Horse Show. The Meadow Event Park. Doswell.
Contact: Eleszabeth McNeel, email: e7aquila@aol.com

4-H LIVESTOCK

OCTOBER

7-9 State Fair of Virginia Youth Livestock Shows and Competitions, Meadow Event Park, Doswell. ***Contact:*** Paige Pratt, (540) 231-4732, email: pjpratt@vt.edu

SHEEP

DECEMBER

3 VSPA Fall Bred Ewe Sale, Rockingham County Fairgrounds, Harrisonburg.
Contact: Scott Greiner. (540) 231-9159, email: sgreiner@vt.edu

September Beef Management Calendar

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

Spring Calving Herds

- Inventory feed supplies, test hay for nutrient content and plan winter feeding strategies
- Give pre-weaning vaccinations to calves
- Make final preparations for calf crop marketing program
- Pregnancy check cows
- Body condition score cows at weaning and separate thin cows
- Put open, old and very thin cows on cull list
- Make arrangements for backgrounding calves
- Continue feeding high Se trace mineral salt
- Continue to stockpile forages, if possible

Fall Calving Herds

- Body condition score cows; plan nutrition and grazing program on BCS
- Inventory feed supplies, test hay for nutrient content and plan winter feeding strategies
- Make sure all calving supplies are on-hand
- Move pregnant heifers and early calving cows to calving area about 2 weeks before due date
- Check cows 3 to 4 times per day; heifers more often – assist early if needed
- Keep calving area clean and well drained; move healthy pairs to large pastures 3 days after calving
- Ear tag all calves at birth; castrate male calves in commercial herds
- Give selenium and vitamin A & D injections to newborn calves
- Feed cows extra energy after calving especially to two-year-olds; cows calving at BCS < 5 should receive special nutritional attention
- Keep high quality, high Selenium, high magnesium minerals available
- Plan estrous synchronization program; line-up AI technician and supplies

2011 Across-Breed EPD Adjustments

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

For several years, geneticists at the U.S. Meat Animal Research Center (USMARC) have provided the table of adjustment factors to be used to estimate across-breed expected progeny differences (AB-EPDs). These adjustments are based on comparative breed research conducted at the USMARC. Adjustment factors for a few selected breeds are presented below.

2011 Adjustment Factors to Add to EPDs of Various Breeds to Estimate Across-Breed EPDs

	BW	WW	YW	Milk	MS	REA	FT
Angus	0.0	0.0	0.0	0.0	0.00	0.00	0.000
Hereford	2.8	- 1.5	- 17.1	- 18.7	- 0.32	- 0.07	- 0.051
Red Angus	2.3	- 1.5	- 8.7	- 1.5	0.00	- 0.12	- 0.038
Shorthorn	5.9	17.9	41.7	19.6	- 0.10	0.24	- 0.151
Braunvieh	5.7	18.5	22.6	30.0	- 0.25	0.92	- 0.171
Charolais	8.5	40.1	48.9	4.6	- 0.40	0.87	- 0.222
Gelbvieh	3.8	3.9	- 10.4	10.2			
Limousin	3.6	0.9	- 31.3	- 13.4	- 0.69	1.06	
Salers	2.0	- 0.3	- 10.5	0.5	- 0.13	0.81	- 0.217
Simmental	4.8	25.9	24.5	15.3	- 0.51	0.95	- 0.218
Tarentaise	1.8	34.8	22.5	23.0			

Source: 2011 BIF Proceedings

To calculate across breed EPDs, add the adjustment factor found in the table to the within-breed EPD published in the most recent genetic evaluation for the animals of interest. As an example, assume a Simmental bull and a Charolais bull are being compared for use as as a terminal sire on mature Angus-based cows. The Simmental bull has a within-breed YW EPD of +60 and the Charolais bull has a YW EPD of +35. To fairly compare the YW EPDs of these two bulls of different breeds, the EPDs must first be adjusted to a common base using the across-breed table. Using the table, the Simmental bull would have an across-breed YW EPD of +84.5 (60 + 24.5 = 84.5) and the Charolais bull an across-breed YW EPD of +83.9 (35 + 48.9 = 83.9). Comparison of the calculated across-breed EPDs for these two bulls suggests they would transmit similar genetics for yearling growth as the difference in their across-breed YW EPDs is minimal.

It is important to note that the adjustment factors found in the table do not represent a direct comparison of breed differences. Without across-breed adjustment factors, EPDs for animals of different breeds cannot be accurately compared. The across-breed adjustment factors take into account breed differences, as well as differences in the established base year (year in which average EPD in breed equals zero) used in the calculation of EPDs for each breed. For these reasons, the adjustment factors themselves are not reflective of breed differences. The adjustment factors should only be applied to the most current EPDs available from the breed associations.

Fall 2011 VQA Sire EPD Specifications

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

With over 10,000 marketed annually, the Virginia Quality Assured Feeder Cattle Program is recognized as one of the strongest reputation feeder cattle programs in the U.S. Cattle feeders in Pennsylvania, the eastern corn belt, and Midwest have grown to associate the program with quality cattle. This reputation is based on several factors, including certification of health and management protocols, documented genetic merit, and strong track record of the program and the producers and organizations involved.

VQA Purple Tag requirements include a yearling weight Expected Progeny Differences (EPD) specification for the sire of each calf. This genetic standard provides assurance to buyers that the calves are sired by bulls that have favorable genetic potential for post-weaning growth. Post-weaning average daily gain (ADG) is an important determinant of feedyard performance and profitability, and is best predicted by YW EPD.

The following table provides the breed minimum yearling weight EPD requirements for sires. The standards apply to all bulls born fall 2005 and later. In 2005, it was decided to "freeze" the existing EPD requirements. This decision was based on genetic merit for growth in the modern cattle population, and provides producers with opportunity to practice balanced trait selection while maintaining acceptable post-weaning performance. Minimum yearling weight EPD standards are breed-specific, and established based on the sire birth year to account for genetic improvement realized over time. Calves sired by bulls with yearling weight EPDs greater than or equal to the minimums published are eligible for the VQA purple tag. In the event a bull does not have a yearling weight EPD, weaning weight EPD is used as the specification. For more details on VQA, visit the Virginia Tech Beef Extension and Education web site at http://www.vtbeef.apsc.vt.edu/, or contact your local Virginia Cooperative Extension office or the Virginia Cattlemen's Association.

VQA Purple Tag
Sire Minimum Yearling Weight EPD Requirements

Breed (%)	Minimum YW EPD	Minimum WW EPD*
Angus	+72	+39
Braunvieh	+4	+3
Charolais (PB and 15/16)	+27	+15
Gelbvieh (PB)	+73	+41
Gelbvieh (Balancer)	+72	+35
Hereford	+64	+38
Limousin	+69	+37
Red Angus	+54	+31
Simmental (PB)	+53	+30
Simmental (1/2)	+53	+23

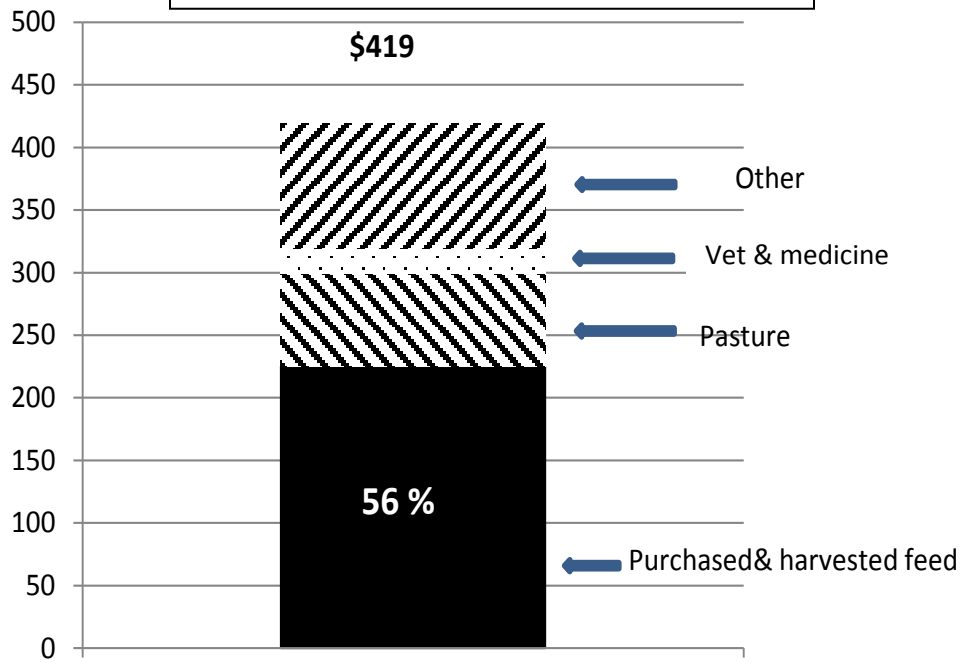
*WW EPD only used if YW EPD not available

Value of Forages is Rising

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

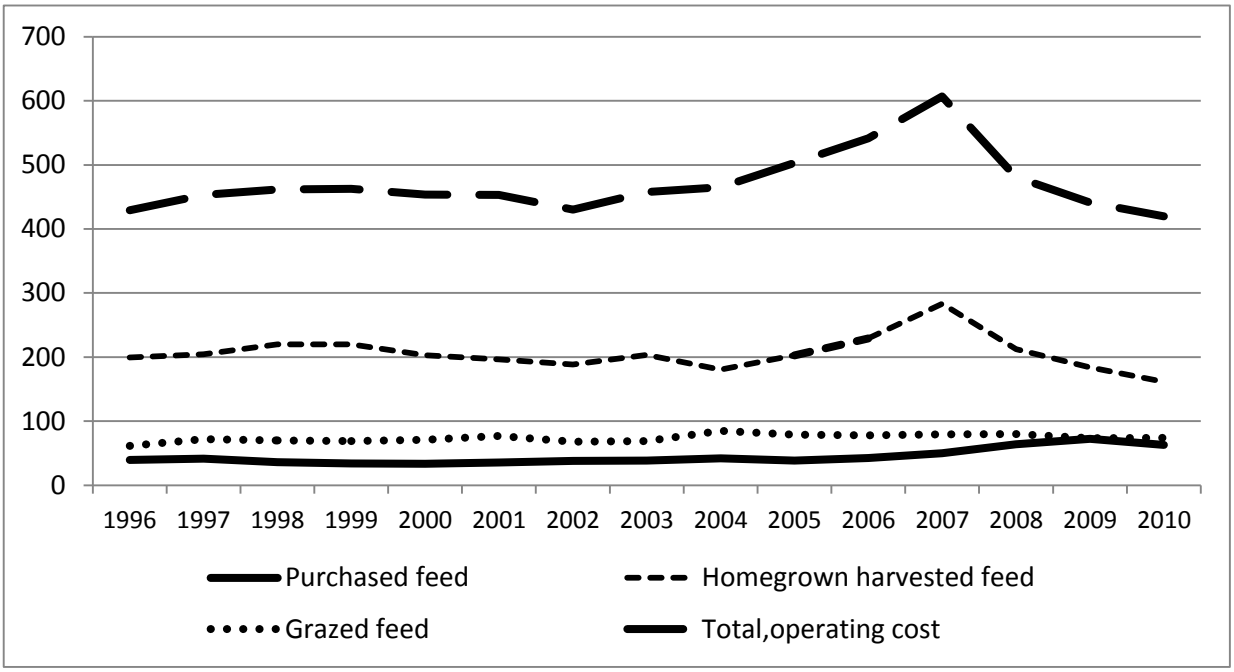
Feed grain prices remain at near record prices and the cost of by-products that Virginia cattlemen annually depend on are running about 20% higher than last year. In addition to feed costs, fertilizer and fuel cost escalation have increased the costs of harvested forages. It is these conditions that mitigate the net profits of a cow-calf operation in a time when cattlemen are receiving almost record prices. The chart below contains a breakdown of the major cash expenses for a cow-calf unit in western Virginia (ERS, 2010). The numbers will not match every operation, but the key point is the contribution of purchased and harvested feeds of the total cost; about 56%. If pasture costs had been added to the feed costs, the total nutritional costs would be close to 70% of the cash expenses.

Figure 1. 2010 Annual Cash Costs, $/ Cow



Economic analysis of cow-calf records in a number of the Midwest and Great Plains states have consistently identified lower annual winter costs with high profit operations and the inverse where low profit operations have an above average winter feed expenditure. Herd size does tend to play a role where smaller herds (<30) tend to have a higher feed cost. Figure 2 contains the total cash costs and some key components plotted over the last 15 years. The trend is up on all costs, but the key point to detect is that pasture costs have been and continue to be one of the more stable costs over time. This pasture cost in this summary would include a bare minimum of fertilizer. The use and amount of fertilizer applied to pastureland would certainly change the trend line. As in Figure 1, the source of the cost data is the Economic Research Service and an annual survey which they conduct. Thus the values presented are the average of information provided by cattlemen in the survey area.

Figure 2. Total Operating Costs and Feed Costs over Years



Virginia Cooperative Extension budgets indicate that it costs about $1.35/d to feed grass hay to a 1200 lb cow during the winter. A 90 d winter feeding period totals $ 121.50/cow/year. However, if the hay feeding period is 135 d then the cost/cow totals $182/cow. Extending the grazing season 30-45d can have important financial impact on the herd. Supplement costs are not included in these totals. Generally as long as there is green grass to graze supplement is not needed. Depending on cow nutrient needs and hay quality, significant investment in supplement can be needed to achieve the same result as grazing stockpiled fescue.

Given the current cost environment, the value of grazed forage has increased when compared to a day of winter hay feeding. Secondly, the quality of the hay has become more of an issue when you consider the cost of supplying TDN or protein from feed grains or by-products to balance the nutrient needs that are unmet when feeding poor hay.

Steps to remember: 1) maximize grazing / minimize use of stored forages
2) store forages to minimize weather damage and loss
3) test forages to insure that supplementation is accurate and efficient

It is true that input costs have increased the annual costs of cow-calf production. It is also true that those cost escalations have increased the value of every grazing day and the value of high quality forages. Management and financial decisions (stockpiling fescue, adding clovers, etc.) need to account for the changing cost and returns that you face in today's production environment.

Sheep Update

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

Virginia Fall Bred Ewe & Doe Sale to be Held December 3

The 2011 Virginia Sheep Producer's Association Fall Bred Ewe & Doe Sale will be held Saturday, December 3 at 1:00 PM at the Rockingham County Fairgrounds in Harrisonburg. Yearling ewes and does, ewe lambs and doe kids, along with mature ewes and does will be sold. All yearling and mature ewes and does will be sold as guaranteed pregnant. Breeds offered will include Suffolk, Hampshire, Dorset, and crossbreds (including wether dams. All does will be registered meat goats or meat goat crossbreds. For a sale catalog or more information visit the VSPA website http://www.vasheepproducers.com/ .

Flock Management Tips – Fall

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

- Work with veterinarian to perform breeding soundness exams on all rams prior to turn-out.
- Flush ewes with 1 pound of corn or barley per day beginning 14 days prior to the breeding season to enhance lambing rate. Continue flushing 4 weeks into breeding season.
- Trim and check feet.
- Stockpile forages.
- Test hay samples to determine their nutritive value. Assess winter feed supplies and devise plan to secure needed feedstuffs. Work with an Extension agent to determine the supplements that will be required to formulate balanced diets for winter feeding.
- Graze spring-born lambs on available fall pasture and aftermath hay fields.
- Supplement grain on pasture to enhance lamb weight gains.
- Plan marketing strategy for any portion of lamb crop that remains.
- Identify and retain ewe lambs from spring lambing to be used as replacements. Breed so that they will lamb first as yearlings.
- After November 1, place ewes on stockpiled fescue pasture.
- Maximize the utilization of stockpiled forages through strip grazing. Use temporary electric fence to limit the sheep's access to a portion of the stockpiled pasture until fully utilized.

Practical Experiences With CIDRs

Scott P. Greiner and Mark A. McCann
Extension Animal Scientists, VA Tech

For a variety of reasons, interest among sheep producers to have fall-born lambs is on the rise. Fall-born lambs typically are well-suited to take advantage of strong early-spring market prices. Additionally, there is strong demand for fall-born lambs to meet the needs of youth which have spring market lamb shows. Favorable weather and forage production associated with fall lambing compliment these marketing opportunities. However, with sheep being very seasonal in their reproduction, fall-lambing is limited by the ability to get ewes pregnant in the spring. Among the options producers have to enhance spring breeding success is hormonal control of the estrous cycle to induce ovulation in ewes. Until recently, however, protocols and products approved specifically for sheep have been a limiting factor for wide-spread application. The sheep EAZI-BREED CIDR is now approved for use in the U.S. and provides sheep producers an additional tool for spring breeding. The CIDR is a vaginal insert which releases progesterone, and is labeled to induce estrus in ewes during seasonal anestrus. The CIDR is a simple, easy-to-use device that is inserted into the ewe for five days, with ram introduction to immediately follow. Following are results of three on-farm applications utilizing CIDRs in spring 2011.

Farm A

Two groups of registered Dorset ewes were synchronized with CIDRs. Group 1 consisted of 31 ewes which lambed mid-January through early February 2011 and were weaned on March 29. Ewes were administered CIDRs on April 29 and introduced to one of 3 Dorset rams in single-sire breeding pastures. CIDRs were removed at either 5 or 7 days following insertion. A control group of 32 ewes were introduced to rams the same day as the synchronized ewes. These control ewes lambed fall 2010 (n = 11) or lambed along with the previously described set of ewes in Jan/Feb (n = 21). Control ewes received no CIDR. All rams had passed a breeding soundness exam and also determined to be active breeders through a libido test (placed with ewes in estrus to determine mating behavior). Ewes had been isolated from rams since lambing.

A second group of 16 ewes which lambed mid-February through early March, 2011 and weaned on April 19 were also synchronized. CIDRs were inserted May 26, removed after 5 or 7 days, and ewes were placed in the same 3 single-sired breeding groups as above. Ewes were in single sire breeding groups until June 13, at which time they were placed with 2-3 Suffolk rams. Pregnancy was determined by ultrasound on August 19. Results are presented below.

	Ewes Pregnant	Ewes Open
Group 1		
CIDR (5 or 7 d)	18 (58%)	13 (42%)
Control	14 (44%)	18 (56%)
Group 2		
CIDR (5 or 7 d)	10 (63%)	6 (38%)
All CIDR Ewes	28 (60%)	19 (40%)

Pregnancy rates were similar for the two groups of synchronized ewes and was 60% for both groups combined. This compares to pregnancy rate of 44% in non-synchronized control ewes. Service sire impacted pregnancy rate. One ram settled only 2 of 21 ewes he was exposed to (both synchronized and control ewes). Excluding ewes exposed to this ram, pregnancy rates were 75% and 58% for synchronized and control ewes, respectively across both Group 1 and Group 2. There was no difference observed in pregnancy rate of ewes with 5 vs. 7 day CIDR. In Group 1, pregnancy rates were similar for ewes which lambed fall 2010 with those that lambed winter 2011.

The cost of synchronization is associated with the cost of the CIDR as well as additional labor and management required. Assuming a CIDR cost of $5 each, cost per pregnancy for synchronized ewes was $8.39 (CIDR cost only considered).

Farm B

A total of 57 Hampshire x Suffolk crossbred ewes were synchronized. These ewes lambed either fall 2010, or late January through February, 2011. Ewes were synchronized using either a CIDR removed at 5 days (n = 8), or using Synchromate-B implant for 10 days followed by PMSG injection (n = 49). Ewes were placed in single-sire breeding pasture with Hampshire x Suffolk crossbred rams (n = 7) at the time of implant or CIDR removal (early June). Rams were subjected to breeding soundness exams prior to placing with ewes. Ewes remained with rams for ~30 days to allow for breeding on a repeat estrus following synchronized estrus. Pregnancy was determined by ultrasound on August 23. Results are presented below.

	Ewes Pregnant	Ewes Open
CIDR (5 or 7 d)	5 (63%)	3 (38%)
Synchromate B	28 (57%)	21 (43%)
Total	33 (58%)	24 (42%)

Pregnancy rates were similar for the two synchronization strategies. Similar to Farm A, ewes exposed to one of the seven sires resulted in no pregnancies. These ewes were hauled ~20 miles to be placed with the ram, and were hauled home immediately after the breeding season which may have had an influence on pregnancy success. The other six rams performed similarly.

Pregnancy rates were similar for the two synchronization strategies. Similar to Farm A, ewes exposed to one of the seven sires resulted in no pregnancies. These ewes were hauled ~20 miles to be placed with the ram, and were hauled home immediately after the breeding season which may have had an influence on pregnancy success. The other six rams performed similarly.

Farm C

A total of 25 Hampshire x Suffolk crossbred ewes were synchronized. These ewes lambed late January through February, 2011. Ewes were weaned in late April. This flock had never exposed ewes for fall lambs. Ewes were synchronized using a CIDR removed at 6 days (n = 8), 8 days (n = 8) or 10 days (n = 9). Ewes were placed in single-sire breeding pasture with Hampshire x Suffolk crossbred ram at the time CIDR removal (late May). The ram was subjected to a breeding soundness exam prior to placing with ewes. Ewes remained with the ram for ~20 days.

Ewes were shorn on July 4th and pregnancy was determined by ultrasound on August 14. Results are presented below.

	Ewes Marked	Ewes Pregnant	Ewes Open
CIDR (6, 8 or 10 d)	19 (76%)	9 (36%)	16 (64%)

Assuming a CIDR cost of $5 each, cost per pregnancy in Flock C was $13.89 (CIDR cost only considered).

Collectively, these on-farm experiences underline several key points when synchronizing ewes for spring breeding:

- Whiteface/Dorset ewes will probably respond more favorably to spring synchronization than blackface ewes
- Ram fertility and libido is critical, conduct BSE on rams and observe closely; use of a marking harness will increase accuracy of monitoring
- Ewe:ram ratio should not exceed 18:1 and may need to be lower depending on the age and capacity of the ram. Single ram flocks should stagger CIDR removal (every 2-3d) to avoid overworking the ram
- Ewes should be in good body condition, weaned and recovered from the weaning process
- Ewes should not be exposed to rams prior to synchronization
- Minimize stress on ewes during and immediately following breeding season (heat, transportation)

For additional information and details on CIDRs, see the 2011 Shepherd's Symposium Proceedings paper by Dr. Keith Inskeep from West Virginia University. This document is available on the VT Sheep Extension site at http://www.apsc.vt.edu/extension/sheep/programs/shepherds-symposium/proceedings.html .

Economical Feed Options for Sheep

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

Given the current and projected cost of corn and by-products, there will be no cheap feeds available this winter. Fuel and fertilizer costs have made stored forages an expensive winter feed option. However, economical implies making the best use of resources. The best use of resources is to expand and stretch grazing options which in turn minimize hay feeding days and supplement needs. This can be accomplished through stockpiling tall fescue, grazing management and hay storage. Each of these reduces the amount of hay needed to winter the flock. Although the cost of fertilizer has increased, the return in added grazing days and reduced winter hay justifies consideration. Frost-seeding of clover next February improves the forage quality of grazing next spring and summer while also fixing nitrogen for later grass growth. The last point related to forage is to be sure and test your winter hay supply so that supplementation decisions are effective, efficient and economical. Table 1 provides supplementation examples for several different qualities of hay.

When making supplement decisions, be sure and compare cost on a lb of TDN or protein basis

ex. 1 lb corn, 80% TDN, $0.15/lb; TDN $/lb = .15/.80 = **19 cents/lb TDN**
1 lb corn gluten, 72% TDN, $0.11/lb; TDN $/lb = .11/.72 = **15 cents/lb TDN**

Corn gluten is the more economical choice, and it has been our most economical feed source. However, it is not a well-balanced feed and requires calcium supplementation for lactating ewes and should be limit-fed to lambs. Some feed mills offer a blended commodity pellet of soybean hulls, wheat midds and corn gluten feed. These feeds typically are tagged at 14% crude protein and have added calcium and vitamins. Some have added molasses to enhance palatability. These commodity feeds should be cost compared to single commodities to determine the most economical choice.

While there are no cheap options there are economic decisions to make in purchasing feeds and supplements. Simply not purchasing feed and supplementing is an excellent example of false economy.

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

Forage Analysis									
CP % of DM	TDN % of DM	Early[2] Gestation		Late[3] Gestation		Early[4] Lactation		Late[5] Lactation	
		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.

2011 Virginia Performance Tested Ram Lamb & Replacement Ewe Lamb Sale Results

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

The 36th Annual Virginia Performance Tested Ram Lamb Sale was held at the Virginia Sheep Evaluation Station at the Virginia Tech Shenandoah Valley AREC near Steeles Tavern on Saturday, August 27. A total of 45 rams sold for an average price of $541. Top-selling ram was a Katahdin consigned by Big H Livestock of Marion, VA which sold for $1,025. An educational field day was held prior to the sale with a nice crowd on hand. Replacement ewe lambs were sold immediately following the rams. A total of 26 ewe lambs sold for an average price of $340. Sponaugle Suffolks of Grottoes, VA consigned the top-selling lot of ewe lambs with a pair of Suffolks selling for $420 each. Rams and ewe lambs sold to buyers in Virginia, West Virginia, and Maryland. Sale results were as follows:

RAMS	**Sale Average**
5 Fall Dorsets	$597
5 Winter Dorsets	$443
2 Winter Hampshires	$380
1 Fall Suffolk	$520
22 Winter Suffolks	$530
4 NC Cheviot x Suffolk Crossbreds	$639
3 North Country Cheviots	$517
1 White Dorper	$650
2 Winter Katahdins	$718
45 Total Rams	$541
EWE LAMBS	
26 ewe lambs	$340

The Virginia Ram Lamb Performance Test and Replacement Ewe Lamb Sale is sponsored by the Virginia Sheep Producer's Association. Information on the 2011 test and sale may be attained from Scott Greiner, Extension Sheep Specialist, Virginia Tech, phone 540-231-9159 or email sgreiner@vt.edu. For more information about the program, please visit the VA Tech Sheep Extension website at www.vtsheep.apsc.vt.edu or the VA Sheep Producers Association website www.vasheepproducers.com .