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Livestock Update

Beef - Horse - Poultry - Sheep - Swine

March 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:

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

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 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 or phone 540-231-2257. Video clips of the bulls and an online catalog will also be posted.

March Beef Herd Management Advisor

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As spring calving winds down, and tax season rapidly approaches, March is an excellent time to reflect on your operation's profitability. This fall brought some changes to the feeder calf market, which is likely reflected in a tighter bottom line compared to previous few years. Often the tendency when reviewing records is to focus on production areas that hold the most interest, such as genetics, forage management, AI/synch programs, etc. It is valuable to look at the major areas as links in a chain rather than singular disciplines. Profitability in your beef enterprise is probably limited more by the weaker links as opposed to further strengthening your strongest links. The major factors affecting beef enterprise profitability include financial management, reproduction, nutrition/forages, genetics, and herd health. As you review 2015 and look ahead to 2016, identify your weaker areas of production and focus on these. Lastly, bull buying season is upon us. Take time prior to the sale to objectively assess your herd strengths and weaknesses relative to genetics. Which areas are strong, and which could use improvement? Utilize the EPDs on your previous herd sires to establish benchmarks for genetic merit of new bulls you want to bring in. Do your homework prior to arriving at the sale, and find those bulls in the catalog which meet your specifications for performance traits (EPDs, frame, pedigree, etc.). Upon arrival at the sale, you can sort through these bulls which you have identified to assess phenotype. Limit your interest to only these bulls which work on paper, as they provide the best opportunity to achieve your genetic goals.

Spring Calving Herds (January-March)

General

- Calving season is in full swing. Check cows frequently during calving season- optimal interval is to observe calving females every four hours (heifers more frequently if possible).
- Identify calves promptly at birth. Record birth weight, calving ease score, teat/udder score, and mothering ability of cow.
- Monitor young calves for scours. Prevent scours by keeping calving area clean and well drained. Moving 2-3 day old pairs out of calving area to separate pasture (reduce commingling of newborn calves with older calves) help reduce exposure to scours.

Nutrition and Forages

- Replace free-choice minerals with a high magnesium mineral to prevent grass tetany. Monitor intake to insure cows are consuming the recommended amount. No other source of salt or minerals should be available.
- 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 high quality hay to minimize supplementation and cow weight loss.

- Although pasture green up is beginning and nutrient content of new growth is high, cows cannot consume enough to meet their nutritional needs. Restricting cows to smaller hay feeding areas will allow new pasture growth to get a faster start.
- Fertilize hay areas with K and P according to soil test recommendations. Add nitrogen at the rate of 40-70lbs/acre.

Herd Health

- Observe newborn calves to ensure colostrum intake first few hours of life. Supplement if necessary. Newborn calves need 10% of body weight in colostrums during first 24 hours of life.
- Provide selenium and vitamin A & D injections to newborn calves
- Castrate commercial calves at birth
- Monitor calf health closely, particularly for signs of scours and pneumonia, have treatment supplies on hand.
- Consult with your veterinarian concerning pre-breeding vaccination schedule for cow herd and yearling heifers. Plan early to allow 30-day vaccination window prior to breeding season.

Reproduction

- Plan AI and synchronization program to be used during breeding season. Order supplies and semen.
- Schedule and conduct breeding soundness exams on herd sires, including annual vaccinations. Do so prior to spring bull sales to allow time to secure replacements as necessary.

Genetics

- Closely examine herd genetic goals and selection criteria for both AI and natural service sires. Establish herd strengths and weaknesses from genetic standpoint, and benchmark EPD criteria accordingly. Make plans for spring bull-buying season.
- Schedule and collect remaining yearling performance data (weight, height, scrotal, ultrasound) in seedstock herds.

Fall Calving Herds (September-November)

General

- Pull bulls to maintain a 60-90 day calving season. Monitor body condition and soundness of bulls.
- Schedule and conduct pregnancy diagnosis with veterinarian 45-60 days following breeding season. Make plans to pregnancy check heifers as soon as possible after bull removal. This will allow options in marketing open heifers.
- Evaluate potential options for marketing of calf crop, including time of weaning, and backgrounding strategy.

Nutrition and Forages

- Begin creep feeding or creep grazing calves if desired.
- Cows are entering latter portion of lactation, above average to good quality hay should meet nutritional requirements.
- Although pasture green-up is beginning, hay should be continued to be offered until consumption declines significantly.
- Reserve high quality hay and a pasture area for calves post-weaning.
- Fertilize hay areas with K and P according to soil test recommendations. Add nitrogen at the rate of 40-70lbs/acre.

Herd Health

- Consult with veterinarian on pre-weaning vaccination protocol for calf crop. Monitor calves closely for health issues, particularly respiratory disease.

Genetics

- Make plans for remaining spring bull sales. Closely examine herd genetic goals and selection criteria for both AI and natural service sires. Establish herd strengths and weaknesses from genetic standpoint, and benchmark EPD criteria accordingly.
- Collect 205-day weights on calf crop at appropriate time (AHIR age range 120-280 days), along with cow weights, hip heights and body condition scores (cow mature size data taken within 45 days of calf weaning measure).

Virginia Tech Livestock Judging Team Travels to First Contest of 2016

Dr. Bain Wilson

The Virginia Tech Livestock Judging Team began their year by competing at the Dixie National Livestock Show and Rodeo in Jackson, MS on February 13. This was the first collegiate livestock judging contest in which Virginia Tech has been represented in over 5 years. Team members include: Andrew Saunders from Nelson County, Emmalee Edwards from Craig County, Grace Ott from Page County, and Troy Whittier from Montgomery County. The contest was an all cattle contest and was divided into into 4 divisions: Brahman breed type, English breed type, Continental breed type, and market steers. A total of 8 colleges competed in the contest. With 3 contestants, Virginia Tech was not eligible for team awards, but team members gained valuable contest experience as thy prepare for future contests in the spring and fall of 2016. The team would like to thank the staffs of the University of Tennessee Bull Test Staton in Spring Hill, TN; Deer Valley Farm of Fayettville, TN; and Dyess Farms of Bassfield, MS for providing excellent practices on the way to Jackson. This spring, the Virginia Tech Livestock Judging Team will also compete at the Southeastern Livestock Expo held in Montgomery, AL in March and at the All East Livestock Judging Contest held at Purdue University in April.

Team members left to right: Andrew Saunders, Grace Ott, and Troy Whittier. Emmalee Edwards was not able to compete at the Dixie National.

Black Vultures: Impact of Livestock Predation

Dr. Bain Wilson

Several weeks ago, I received an inquiry asking about the threat of black vultures to livestock. This question was certainly spurred on by the introduction of Senate Bill 37 in the Virginia General Assembly. This bill would serve to exempt the black vulture from the federal Migratory Bird Act and allow black vultures to be controlled in similar fashion as coyotes. Because I have no background in wildlife conservation, I had to look further into this issue. After some substantial time spent looking into the impact of black vulture predation on livestock in Virginia, I decided to share my findings in this month's livestock update.

A distinction should be made between red-headed turkey vultures and the black-headed black vultures that are at the center of this livestock predation issue. Unlike turkey vultures, which are primarily scavengers, black vultures are known to kill live animals for food. Black vultures have been reported to kill young calves, sheep and goats. These birds have also been reported to kill both cows and newborn calves during parturition.

A quick internet search yields local news stories that account for black vulture attacks on livestock throughout the Southeast and as far north as Ohio. Black vultures have been reported to gather in large groups to attack larger animals, ripping at their prey's flesh with their talons. The birds will also peck animals' eyes in an effort to disorient, overwhelm and ultimately kill them. This behavior has been observed in cattle operations, where vulture activity is often focused in pastures where calving is occurring. Having cows, ewes, and does give birth in barns is a recognized way to decrease losses of livestock to predators. But it should be understood that while many cows and ewes do give birth in barns each year, it is not possible to ensure every animal gives birth in barns because of the extensive nature of many livestock operations.

Both turkey vultures and black vultures are considered migratory birds. However, black vultures in particular have become more locally resident as they have adapted to the presence of human activity. In fact, black vulture range has been expanding northward in the last 50 years. In 2006, the black vulture population in Virginia was estimated at 91,190 birds. In North Carolina, it is estimated that the population of black vultures is increasing by 10.6% annually. Researchers estimate that 3,500 black vultures can be culled in Virginia without adversely affecting population stability.

The monetary ramifications of predator losses are great. In 2010, the National Agricultural Statistics Service (NASS) estimated cow and calf loss to predators nationwide totaled 220,000 head, or 5.5% of total deaths from all causes. This equaled a monetary loss of $98.5 million. In the same year, national cow and calf losses to vultures alone totaled 11,900 animals, accounting for 5.4% of total loss to predators. This represented a $4.6 million cost to US cattle producers. In 2010, 600 cows and 4,800 calves were lost in Virginia to predators. Virginia predator losses in 2010 represented over $2 million in combined economic losses of cows and their calves. During the same year, NASS estimated that 7.8% and 12.9% of cows and calf, respectively, losses to predator attack in Virginia were attributed to vultures. Thus, approximately 47 cows and 619 calves were killed in 2010 by vultures in Virginia. A common theme throughout several USDA-APHIS reports is that current reporting of livestock losses to black vultures is incomplete. Losses to black vultures are typically only reported by producers receiving assistance with coyote control. Thus, livestock losses to black vulture predation may be greater than reported.

Because black vultures are listed under the Migratory Bird Act, USDA-APHIS-Wildlife Services (WS) is not able to adequately track black vulture numbers or appropriate funding for WS personnel to work with livestock producers to employ non-lethal measures to control black vultures. If passed, Senate Bill 37 would exempt black vultures from the Migratory Bird Act, allowing WS to appropriate funds toward tracking of black vulture numbers and to work with producers to implement non-lethal methods to disperse black vultures from roosting sites near livestock operations. These methods include: proper disposal of dead livestock, noise harassment, trapping, effigies of dead vultures, and guard animals. No one single method has proven effective in displacing black vultures from roosting sites. It is only recommended that black vultures be shot after non-lethal methods of control have failed. With the passage of Senate Bill 37, black vulture control would fall under the Virginia Cooperative Coyote Damage Control Program, used in conjunction with coyote control. Even though black vultures are protected under the Migratory Bird Act, people experiencing problems with vultures are currently able to obtain permits through the US Fish and Wildlife Service to kill a limited number of birds annually.

Details Available for Virginia Tech 2016 Southwest AREC Ram Test

In 2012, the Virgnia Tech Southwest AREC Ram Test was initiated. This unique program evaluates rams for performance utilizing a forage-based development program. Rams will be delivered to the station on May 31. Upon delivery, rams will be dewormed and efficacy of the anthelmentics established during a three-week adaption period. Growth performance along with parasite resistance will be measured over a 70-day test period, during which rams will be provided 2% of their body weight in supplemental grain along with access to high quality pastures. Parasite resistance will be evaluated using fecal egg count and FAMACHA response to a standardized dose of parasites given at the start of the test period. In addition, rams will be evaluated for carcass traits with ultrasound during the test, and DNA genotyping will be conducted for and scrapie resistance. Eligible rams will sell in conjunction with a field day on September 23. Rams born January 15 to March 15, 2016 are eligible. For rules and regulations, as well as entry forms contact Scott Greiner at 540-231-9163 or visit http://www.apsc.vt.edu/extension/sheep/index.html .

Virginia Tech Southwest AREC Ram Test
Historical Test and Sale Expense Summary

	2015	2014	2013	2012
Total Rams Evaluated	109	104	126	85
Test Costs				
Feed	$42.32	$36.70	$32.29	$43.70
Yardage	$10.00	$10.00	$10.00	$8.00
Codon 171/Spider Genotyping	$11.00	$11.00	$11.00	$11.00
Vet/Medical	$43.15	$28.25	$27.50	$21.50
Misc.	$6.85	$5.00	$7.00	$7.50
Total Test Costs Avg. Per Head	$113.32	$91.20	$87.79	$91.70
Sale Costs				
Post-test feed	$5.30	$6.30	$7.75	$5.63
Sale costs	$12.22	$15.00	$10.00	$12.00
VA Check-off	$0.50	$0.50	$0.50	$0.50
Total Sale Expenses Avg. Per Head	$18.02	$21.80	$18.25	$18.13
Grand Total Test & Sale Expenses Avg. Per Head	$131.34	$113.00	$106.04	$109.83
SALE RESULTS				
Number Sold	36	20	22	30
Average Price	$1222	$1048	$486	$883

Consignments Being Accepted for 2016 Virginia Ram Lamb Performance Test

Consignments are currently being accepted for the 2016 Virginia Ram Lamb Performance Test to be conducted at the Virginia Sheep Evaluation Station located at the Shenandoah Valley Agriculture Research and Extension Center. Rams will be delivered to the test station May 3, and after a two week adjustment period, will be performance tested for 63 days. In addition to measurement of growth performance, rams will be evaluated for carcass traits with ultrasound during the test, and DNA genotyping will be conducted for spider syndrome and scrapie resistance. Eligible rams will sell August 27. Rams born September 1, 2015 to February 29, 2016 are eligible. For rules and regulations, as well as entry forms contact Scott Greiner at 540-231-9163 or visit http://www.apsc.vt.edu/extension/sheep/index.html .

Virginia Performance Ram Lamb Test Historical Test and Sale Expense Summary

	2015	2014	2013	2012	2011
Test Costs					
Feed	$86.21	$95.28	$116.22	$112.19	$111.95
Yardage	$8.00	$8.00	$8.00	$8.00	$8.00
Codon 171/Spider Genotyping	$11.00	$11.00	$11.00	$11.00	$11.00
Vet/Medical	$3.31	$4.54	$2.22	$4.08	$1.21
Misc.	$4.94	$6.50	$6.05	$6.98	$6.78
Total Test Costs	**$113.46**	**$125.32**	**$143.49**	**$142.25**	**$138.94**
Sale Costs					
Shearing	$6.00	$6.00	$6.00	$5.50	$5.50
Sale costs	$12.00	$9.00	$8.57	$9.65	$9.98
Registration Transfer	$6.00	$6.00	$6.00	$6.00	$5.00
VA Check-off	$0.50	$0.50	$0.50	$0.50	$0.50
Total Sale Expenses	**$24.50**	**$21.50**	**$21.07**	**$21.65**	**$20.98**
Average Sale Price	**$483**	**$467**	**$579**	**$554**	**$541**
Average Total Test & Sale Expenses	**$138**	**$147**	**$165**	**$164**	**$160**
Average Net to Consignor	**$345**	**$320**	**$414**	**$390**	**$381**

SALE RESULTS Breed Group	2015 No.	 Avg.	2014 No.	 Avg.	2013 No.	 Avg.	2012 No.	 Avg.	2011 No.	 Avg.
Winter Suffolk	16	$461	21	$518	25	$602	22	$640	22	$530
Fall Suffolk	3	$583	1	$850					1	$520
Fall Dorsets	12	$477	9	$433	11	$664	8	$516	5	$597
Winter Dorsets	6	$458	5	$355	4	$713	10	$413	5	$443
Winter Hampshire	2	$450	3	$450	4	$538			2	$380
Fall Katahdin										
Winter Katahdins	4	$619	2	$375	4	$475	4	$631	2	$718
Fall White Dorper	1	$625	1	$300						
Winter White Dorper					6	$379	2	$638	1	$650
Winter NC Cheviot	1	$425			1	$325	1	$400	3	$517
Winter Crossbred	4	$413	1	$300			5	$460	4	$639
Total Rams	49	$483	43	$467	55	$579	52	$554	45	$541
Commercial Ewe Lambs	45	$323	38	$357	40	$303	29	$330	26	$340

Benchmarking EPDs

by Scott P. Greiner
Extension Animal Scientist, Beef
Virginia Tech

EPDs have proven to be the most effective tools for genetic improvement of beef cattle. Since the majority of the genetic progress within a herd is a direct result of sire selection, EPDs should be given careful attention when choosing bulls. With the vast number of EPDs that are available for use, selection goals must be carefully established to determine which EPDs are of primary importance. Additionally, EPDs should be combined with other selection criteria, such as structural and reproductive soundness (for which EPDs are not available), to determine which sires are most suitable.

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 becomes: What WW EPD does the bull ideally need to have? Is there a minimum? or maximum? The likely correct answer is that there is a range in EPDs that would be considered acceptable. The adage that more is better is not applicable in many bull 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. Defining an optimum EPD range or benchmark allows

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 our goal, it would be advantageous to know the WW EPD values of our current sires. We could then set our WW EPD goal at some higher level compared to those bulls. Similar examples can be applied to calving ease and birth weight, milk, 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. Current EPDs on any bull can easily be obtained using the bull's registration number and the online searches available through breed association web sites.

Breed percentile rankings are additional tools that can assist with EPD benchmarking. 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 (which can be accessed online). With this information, bulls can be specifically evaluated as to where their EPDs rank in the breed (breed average, top 10% vs. bottom 20%, etc.). It important to note that percentile rankings do not reflect genetic differences for traits between breeds, and can be misleading if not used in the proper context. For example, a Simmental bull with a milk EPD values that rank relatively low within breed should not necessarily be discriminated against, since the average genetic merit for milk production in the breed is high. Therefore, the general merit of the breed for each trait needs to be considered along with the rank of an individual bull within that breed.

In summary, EPDs are a powerful selection tool. For most effective use, optimum or acceptable EPD ranges need to be defined and applied to bull selection.