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

October 2010

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

6 VA Field Day. Culpeper Ag Enterprises. Culpeper. 3:00 p.m. ***Contact:*** American Simmental Association, (406) 587-4531; email: simmental@simmgene.com

DECEMBER

11 Culpeper Sr. VA BCIA Bull Sale. ***Contact***: Scott Greiner, (540)231-9163, email: sgreiner@vt.edu

FEBRUARY

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

GENERAL

OCTOBER

29 16th Annual Hokie Harvest Sale. Alphin-Stuart Arena. VA Tech Campus. Blacksburg. ***Contact***: Dan Eversole (540) 231-4738, email: deversol@vt.edu

SHEEP

DECEMBER

4 VA Sheep Producer's Association Fall Bred Ewe Sale. Rockingham County Fairgrounds. Harrisonburg. 1:00 p.m. ***Contact:*** Corey Childs, 540-955-4633.

JANUARY

15 Shepherd's Symposium. Augusta County Government Center. Verona. ***Contact***: Scott Greiner, (540) 231-9163, email: sgreiner@vt.edu

October Beef Management Calendar

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

Spring Calving Herds

- Work calves prior to weaning, administer pre-weaning vaccinations
- Wean calves this month or early next month
- Market calves to your best advantage
- Make arrangements for backgrounding calves
- Feed replacement heifers to gain 1.5 – 1.75 lbs per day or use the target weight method to calculate rate of gain
- Pregnancy check cows
- Body condition score cows at weaning and separate thin cows
- Cull open, old and very thin cows; check feet and legs, udders and eyes
- Switch to high magnesium minerals to prevent grass tetany
- Finalize winter feeding strategies and inventory feed supplies, and secure feed for winter

Fall Calving Herds

- Continue calving
- 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 move healthy pairs out to large pastures 3 days after calving
- Body condition score cows at calving; plan nutrition/grazing program based on BCS
- Ear tag and dehorn all calves at birth; castrate male calves in commercial herds
- Give selenium plus vitamin E and vitamin A & D injections to newborn calves
- Feed cows extra energy after calving; protein supplementation may be needed if good pasture is not available. Cows calving at BCS < 5 should receive special nutritional attention.
- Keep high quality, high magnesium, high selenium minerals available
- Reproductive tract score and measure pelvic areas on yearling replacement heifers; RTS should be 3 or better and pelvic areas should be >150 sq. cm
- Plan estrous synchronization program; line-up AI technician and supplies

How Am I Going to Feed My Cows This Winter?
Trying to Make Lemonade from Lemons

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

Our year in Virginia began under plenty of snow which gave way to a muddy March and more recently into a dry summer and early fall. Growing and storing adequate forage for the upcoming winter has been challenging in most localities and in some areas grazeable forage has been short during a few times during the summer drought. Now cattle producers are faced with an ever shrinking growing season, diminished forage reserves and the unknown winter ahead. As we try to squeeze this pile of lemons, rest assured that we have some time tested strategies that can be utilized to manage our limited feed resources.

1) Wean calves. Most spring born calves are programmed to be weaned in the near future. Weaning calves will allow the dry cow to get by on a minimum of forage quality and quantity. Better forage (if available) and supplement can be provided to calves at a higher level and more efficiently than milk from a cow in late lactation on drought stressed pasture. Consider taking advantage of preconditioning your calves and identifying them as such at marketing.

2) Strategically cull. The goal is to carry forward and winter only bred females. Depending on your local conditions and the stocking change you need to make, additional selection pressure can be put on potential function problems such as eyes, poor feet and legs and poor temperament. Done correctly, stocking rate is reduced, cash is generated to potentially purchase feed if needed and the resulting herd is more efficient and has a greater potential for future profit.

3) Critically assess forage inventory, quality and condition. Forage harvest is mostly over, so a factual inventory is needed to form a basis for winter feed decisions. Realize that last year's long, snowy winter is probably not the best foundation to predict hay needs. Make sure that inventory includes carryover hay. Typically, it takes two bales of hay carried over outside to equal one bale of this year's crop due to spoilage. Hay carried over in the dry will not change significantly in energy or protein content. Vitamin content of carried over hay (stored inside or outside) should be assumed to be nil. Cattle fed carried over hay should receive supplemental vitamins via their mineral or supplement. Also be aware that sheltering this year's hay harvest is important. In a time of forage shortage, you cannot afford to lose 20% to weather loss. Tarps, barns and sheds will work and extend the limited amount of hay on hand.

4) Shop for hay. Based on inventory and condition of your forage supply, now is the time to look at choices and options. Hay is limited but not impossible to locate. Some areas in-state and in neighboring states have had a productive year and hay is available. Freight can be as great a cost as the hay itself so shop local if possible. VDACS has a hay clearing house posted on-line at http://www.vdacs.virginia.gov/marketnews/pdffiles/hay.pdf and a listing for out-of state sources at http://www.vdacs.virginia.gov/marketnews/haylinks.shtml . The Virginia Cattlemen's Association has also initiated a hay clearinghouse on their website

http://www.vacattlemen.org/. If you are aware of someone with hay, encourage them to list it on the clearinghouse or advertise it locally.

5) Explore forage alternatives. As we move into other crop harvests; corn stalks, soybean stubble, peanut vines and cotton gin trash can all serve as roughage sources for cattle. In some situations fields can be grazed and in others these crop aftermaths can be packaged and shipped. Round bales of the crop aftermath will not shed rain like grass hay and should be stored in the dry. In some situations, vegetable crop culls are a potential alternative feed. Recycled poultry bedding can be an option if you are in or near a supply.

   A pound of corn can supply the energy of almost two pounds of hay. As you compare alternatives don't rule out grain or feed by-products as a substitute for hay. At first glance it might appear too costly, but compare it on a lb of TDN basis before you reach a conclusion. Meeting halfway might be the smartest approach; limiting feeding hay and feeding some supplement.

6) Forage test. Regardless of your forage source, it is important to test your feedstuffs to allow matching forage quality to cattle nutrient needs. Most of the crop aftermath and other waste materials have lower protein and energy content and are a better match for the nutrient needs of dry cows rather than lactating cow or stockers. It is particularly important to be informed on dry matter content of high moisture feeds that you may consider. Knowing the DM content will allow a more accurate price comparison and insure that you do not underfeed dry matter. Also be aware high moisture products can be perishable items if not ensiled or fed quickly. This can be especially true of vegetable or fruit waste.

7) Manage what you have. Most cattlemen have been stretching pasture resources by grazing extra areas and boundaries, as well as rotating pastures. If and when we receive rain, keeping cattle confined to a smaller area and allowing stressed pastures a chance to rebound will produce more total forage growth than allowing cattle free access to a whole boundary and allowing them to graze off the tender regrowth. Feeding some carry over hay would be a better use of resources. Depending on October moisture and temperatures we can still grow a significant amount of forage if we allow forages a chance.

8) Fall calving cows. Much of the above is targeting spring calving cows. Cows calving this fall have few options other than meeting the cow's nutrient needs as cheaply as possible until the cow is bred back. Post-breeding there are other options such as early weaning or reducing nutrition and letting the cows rough it. That is too far away to reach any conclusions. First of December will be a better time to start considering those options.

9) Monitor cow body condition. Regardless of calving season, keep a close eye on cow body condition to monitor the impact of your nutrition program during this fall period.

The old saying is "Every drought is followed by a good rain". I hope you have experienced that feeling before you read this. Either way, the points above can stretch your resources and perhaps assist you in making lemonade from the lemons we have been dealt.

Sick Calves and Kids

Dr. Dee Whittier, Extension Veterinarian, Beef Cattle
VA-MD Regional College of Veterinary Medicine, VA Tech

With the arrival of a dry fall, many calves will move from their home farms in the next few weeks. Calf prices are relatively good so this should be a happy time. At about the same time children all over Virginia have returned to schools to learn the academic things they must know to become functioning members of our society.

The down side to all of this is that in a few weeks hospital pens will be full of calves being treated for disease and some will have died; meanwhile doctors' offices will be full of parents with sick children.

So how can this be, with all the advances in modern medicine that we have at our disposal? Hasn't there been enough vaccination? Virginia school regulations dictate that all children be vaccinated for basic diseases before they enter school. Unfortunately, many of the calves that leave their home farms have not been vaccinated. But even if they all were vaccinated, would some still end up in the hospital pen?

How Kids and Calves Are the Same

Many of us have had the unfortunate experience of having well vaccinated calves get sick anyway…just like well vaccinated children get sick after being exposed to other kids at school and being stressed with a new routine. Of course children (and hopefully calves) have been vaccinated against the really bad diseases. Children are not dying of polio, measles or diphtheria. Well vaccinated calves don't die of IBR, BVD or Blackleg. But the story is not that simple.

One of the reasons kids and calves still get sick after vaccination is that there a number of viruses for which no vaccination is available. In human medicine we talk about "cold" and "stomach" viruses. In a respiratory disease outbreak in Japan, 24 strains of rhinovirus were isolated. Like the human situation, there are probably too many viruses that change too rapidly to ever have enough vaccines to prevent all such infections.

How Kids and Calves Are Different

Fortunately, most of the viruses that children contract at school cause relatively mild conditions. With the right medical attention and some tender loving care they recover relatively rapidly. The bad news is that calves do not fare so well. Many calves infected with viruses will develop pneumonias that will make their condition very serious. Calves lack the ability to efficiently prevent bacteria from invading their lungs. Some of these bacteria are normal bugs that live in the noses and throats of calves but don't invade unless there is a viral infection or stress. Others of the bacteria probably are more serious causes of disease and build up among sick cattle to which calves are exposed.

Another difference between calves and kids is that children get treated a lot better. No days without feed and water. No being torn away from their mothers all at once. A chance to stay home to rest and recuperate.

In the end, a lot of calves will get really sick. Without antibiotics and tender loving care they will either die or have prolonged, serious disease that will result in major losses in production.

How Can We Help the Sick Calf Issue?

1. Vaccinations are required for kids and ought to be for calves.
2. Reduce stress. Here are 10 specifics:
    a. Separate the stress of weaning from the stress of marketing. The market is willing to pay you to do this if you find the right way to sell calves, and you can get some economical gains.
    b. Wean gently (on farm, fenceline or nose weaner systems)
    c. Good watering systems for weaning and marketing
    d. High quality hay at weaning
    e. Palatable, medium energy supplements at weaning
    f. Separate the stress of commingling (a necessary evil for many Virginia calves) from the stresses of weaning and marketing
    g. Low stress handling
    h. Separate the stress of processing (vaccination, implanting, etc.) from the stress of weaning and marketing
    i. Separate the stress of castration and dehorning from the stress of weaning and marketing
    j. Shorten time-in-transit when marketing
3. Use antibiotics judiciously. Metaphylactic antibiotic treatment (usually given when calves are purchased) is one of the most effective procedures that has been studied in recent years in preventing illness and death in “high risk” calves. High risk calves are those where the prior owner didn’t do 1 and 2 above.

Sick calves, like sick kids seem to be a fact of life. However, good management can reduce the rate of sickness and well as minimize the bad outcomes.

Crossbreeding "Revisited"

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

As I travel around the Commonwealth (and across the U.S. for that matter), there is renewed enthusiasm for crossbreeding among cow-calf producers. The benefits of crossbreeding systems in the beef sector have been extensively researched over the years, and the practical implications of the benefits of crossbreeding are as relevant and important today as they were 25 years ago. While very little has changed from a science perspective, as an industry we have seemed to "rediscover" crossbreeding. There are likely many contributing factors to this movement, not the least of which is the challenging economic realities of today's beef business. Commercial cow-calf producers are faced with optimizing a number of economically important traits, while simultaneously reducing costs of production in order to remain competitive.

There are numerous benefits to a well-designed crossbreeding system. This article is designed to summarize these benefits into key points which are based on both research and observed results in the field.

Crossbred Cows Make Better Females: The largest single benefit to crossbreeding is realized the in the crossbred cow. In fact, approximately 60% of the total advantage in heterosis (hybrid vigor) in a crossbreeding system can be attributed to the crossbred cow. The large advantage is derived from the reproductive advantages of the crossbred cow. She simply is more apt to rebreed following calving, which results in more longevity (she stays in herd longer since she is not culled for being open). This advantage, coupled with the superior mothering and maternal ability of the crossbred female results in more pounds of calf at weaning per cow exposed. With reproduction being the most economically important performance trait, the merits of maintaining a crossbred cow fully justify implementation of a crossbreeding program. We all understand the concept that open cows are not profitable. Add to this the advantage of the crossbred in longevity, and the crossbred cow has more years to dilute out the costs of developing her as a heifer. Collectively, these differences in reproduction and longevity favorably impact both costs of production as well as production output.

Crossbred Calves Weigh More: For most cow-calf producers selling feeder cattle, net income is derived primarily from calf sales. This net income is a function of number of calves sold, calf weight, and calf value per pound. Crossbreeding impacts the first two of these in a major way. First, crossbred calves exhibit hybrid vigor at birth and through weaning- put another way they are more apt to survive to weaning and be sold. More calves born (see above) and more calves alive equate to more pounds to sell. Along with this, heterosis impacts calf growth favorably resulting in heavier weaning weights than the average of the parental breeds used to form the crossbred.

Crossbreeding Balances Genetics: Crossbreeding provides the ability to take advantage of the strengths of two or more breeds to produce offspring that have optimum levels of performance in several traits. This has become more of a challenge in today's beef industry as we have many new tools and EPDs at our disposal from which to make genetic decisions. No one breed or no one bull within a breed can meet all of our needs. Crossbreeding allows us to capture the strengths of two or more breeds, and match breeds in a complimentary fashion. A simple example is the ability to

balance Quality and Yield Grade potential, two classically antagonistic traits. The established superiority of British breeds can be matched with the known advantages in muscling and leanness of Continental breeds to produce calf with a balance of these economically important traits and the ability to meet various market and consumer targets. Similarly, milk production growth, and mature size may be most effectively optimized by crossing two or more breeds. The cumulative effect crossbreeding has when several traits are considered is more important than any one particular trait. Effective crossbreeding programs must be designed to optimize performance, not necessarily maximize it.

Crossbreeding Has Become Simplified: Several advances in technology have made crossbreeding much simpler to apply and sustain, particularly for small cow herds. The availability of hybrid/composite bulls allow for the introduction of hybrid vigor into the calf crop without wide fluctuations in breed type. Technology has allowed for the computation of EPDs on these hybrid bulls, so as an industry we can apply selection practices in same fashion as we use them in purebred seedstock. Similarly, we have DNA genotyping at our disposal to relatively cheaply manage traits such as coat color. Another change which has evolved in Virginia is the availability of commercial crossbred females. There are a significant number of producers which market bred females. These females are crossbred, with built-in maternal heterosis and by purchasing replacement heifers cow-calf producers benefit from a simpler breeding system (terminal sire) and fewer management groups to tend to in their operation (no weaned heifer calves or developing yearling heifers). Lastly, advances in estrus synchronization research has resulted in several protocols which utilized timed-AI breeding. Through AI, the best bulls of any breed are at a producer's disposal for incorporation into their herd.

For more details on crossbreeding and crossbreeding systems, visit the Virginia Tech Extension Beef site at www.vtbeef.apsc.vt.edu or contact your local Virginia Cooperative Extension Office.

VQA Sire EPD Specifications Fall 2010

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

The Virginia Quality Assured Feeder Cattle Program has matured into one of the strongest reputation feeder cattle programs in the country. Cattle feeders have grown to associate the program with quality cattle. This reputation is based on several factors, including certification of health and management protocols as well as documented genetic merit.

VQA Purple Tag requirements include a yearling weight Expected Progeny Differences (EPD) specification for the sire of each calf. Minimum yearling weight EPD standards are breed-specific and established based on the sire birth year to account for genetic improvement realized over time. 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. This genetic standard provides assurance to buyers that the calves are sired by bulls that have favorable genetic potential for post-weaning growth performance. Post-weaning growth (ADG in feedyard) is an important determinant of feedyard cost of gain (cost to put on live weight or carcass weight) and profitability. Genetics of post-weaning growth is most effectively managed through sire selection using Yearling Weight EPD.

The following table provides the breed minimum yearling weight EPD requirements for sires, and applies to bulls born fall 2005 and after. 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

16th Annual VirginiaTech

HOKIE HARVEST SALE

Friday Evening, OCTOBER 29, 2010 6:30 P.M.

On Campus • VT Beef Cattle Center Complex • Blacksburg, VA

Selling! ELITE GENETICS

19 Service Age Bulls - Complete With Performance & Ultrasound Data

Angus • Hereford • Simmental • SimAngus

VPI Lucky One W965 - Lot 24

VPI Red Rock W912 - Lot 22

VPI Torque 9W35 - Lot 14

9 Purebred Spring & Fall Cow/Calf Pairs - Top-Of-Breed Genetics

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