

OFF THE HOOF

Kentucky Beef Newsletter January 2017

Published Monthly by Dr. Les Anderson, Beef Extension Specialist, Department of Animal & Food Science, University of Kentucky

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Timely Tips

Dr. Roy Burris, Beef Extension Professor, University of Kentucky

Spring-Calving Cow Herd

- Start cows on the high magnesium mineral supplement soon. Consider protein supplementation if hay is less than 10% crude protein. If cows are thin, begin energy (grain) supplementation now.
- Consider vaccinating the cows to help prevent calf scours.
- Keep replacement heifer calves gaining enough to reach their “target” breeding weight (65% mature weight) and to be cycling by the start of the spring breeding season.
- Study the performance of last year's calf crop and plan for improvement. Plan your breeding program and consider a better herd sire(s). Select herd sires which will allow you to meet your goals and be willing to pay for superior animals.
- Get ready for calving season! See that all equipment and materials are ready, including obstetrical equipment, record forms or booklets, eartags, scales for obtaining birthweights, etc. Prepare a calving area where assistance can be provided easily if needed. Purchase ear tags for calves and number them ahead of time if possible. Plan for enough labor to watch/assist during the calving period.
- Move early-calving heifers and cows to pastures that are relatively small and easily accessible to facilities in case calving assistance is needed. Keep them in good condition but don't overfeed them at this time. Increase their nutrient intake after they calve.

Fall Calving Cow Herd

- Breeding season continues. Keep fall calving cows on accumulated pasture as long as possible, then start feeding hay/grain. Don't let these cows lose body condition!
- Provide clean windbreaks and shelter for young calves.
- Catch up on castrating, dehorning and implanting.

General

- Provide water at all times. Cattle need 5 to 11 gallons per head daily even in the coldest weather. Be aware of frozen pond hazards. Keep ice "broken" so that cattle won't walk out on the pond trying to get water. Automatic waterers, even the "frost-free" or "energy-free" waterers can freeze up in extremely cold weather. Watch closely.
- Increase feed as the temperature drops, especially when the weather is extremely cold and damp. When temperature drops to 15°F, cattle need access to windbreaks
- Feed hay in areas where mud is less of a problem. Consider preparing a feeding area with gravel over geotextile fabric or maybe a concrete feeding pad.
- Consider renovating and improving pastures with legumes, especially if they have poor stands of grass or if they contain high levels of the fescue endophyte. Purchase seed and get equipment ready this month.

“Mister, I own a hundred cows...”

Dr. Roy Burris, Beef Extension Professor, University of Kentucky

After working for seven years in Mississippi, I moved back to Kentucky in 1981 and one of my first producers meetings was a memorable one in Bowling Green. An older gentleman, who worked as a pharmaceutical representative, was a jovial guy but, perhaps, a bit out of touch. As he plied his wares, a woman asked him a question about deworming cattle. He probably meant no harm but he said something that implied that she might have her husband take care of that. Whoa boy, the lady stood up and calmly said “Mister, I own a hundred head of cows and I am capable of making my own decisions”. My gentleman friend was thoroughly embarrassed and, although he apologized profusely, it was “message delivered”.

That might have “played” in Mississippi where the cattlemen’s association at that time had a separate group for women – called the “Cowbelles” but as Bob Dylan sang, “the times they are (were) a ‘changin’”.

When I studied vocational agriculture in Tennessee (in the early ‘60s) it was all boys, except when we elected a “sweetheart” for the yearbook pictures. By the time I enrolled in graduate school at UK in 1970, we had several female students in our animal science classes. They were exceptionally good students, too. No logical reason why they wouldn’t have been but it did represent change.

Let me say this right now: I was country as country could be, but I was (and still am) proud of this change in the “farming landscape”. Two of the largest farm owners in our community when I was growing up was “Aunt Retta” and “Cousin Martha”. They had a lot of pride in the land and lifestyle of their “fathers”.

Now, let’s fast-forward to the present. Eighty-one percent of the students majoring in animal science at UK are women. Ladies have taken to agriculture like “ducks to water” and, let’s be honest, some of the males need to turn it up a notch. When we’ve hired folks to work in our beef IRM programs in recent years, we have looked for the best people that we could find. We hired people with names like Alison, Jerene, Jennifer, Lori and Blair! These folks, along with several men, will always be associated with these successful programs.

Our land grant universities are producing a lot of top notch agricultural graduates that are women and they are being very successful in the workplace. The U.S.D.A. estimates that one-third of the U.S. farmers are women. Why was it ever thought to be a novel idea for women to be active in leadership roles in agriculture? The University of Kentucky has the finest group of Extension Agents for Agriculture and Natural Resources (ANR) in the United States and one-third of our ANR and Horticultural agents are women. I doubt that number will ever decrease.

Sometime ago I was completing some forms that wanted to know about our efforts for diversity and asked if we had any programs for women and minorities. Well “Hello Pete”! All of our programs are for everyone. Is

separate ever really better. Many of our specialists, agents and coordinators are women and the level of female participation in our “Master” programs has grown steadily. We have 540 women Master Cattleman graduates and probably a third of our Master Grazer participants are female, too.

Some men still might not be sure how to interact with women in an area that a generation ago was dominated by males. I think the answer is simple – treat them with the same level of professionalism and respect that you would (or do) want accorded to your daughters – nothing less. I just wish that “Aunt Retta” and “Cousin Martha” could see us now.

Upcoming UK Beef Programs

Mr. Ben Crites, IRM Coordinator, University of Kentucky

Master Cattlemen 2017: The University of Kentucky Beef IRM committee has received funding to host the Master Cattlemen program series in 2017. The Master Cattlemen program is a multi-session program that covers all aspects of beef production. The program consists of 10 different sessions covering the following topics: Reproduction, Health, Genetics, Marketing, Facilities and Animal Behavior, Management skills, Environmental Stewardship and Industry Issues, Nutrition, End Product, and Forages. Each session is presented by the respective area specialist. To complete the program, participants must attend 8 of the 10 sessions and also have a current Beef Quality Assurance certification. Producers that successfully complete the program receive a ready reference of materials covered during the sessions, a personalized farm gate sign, and can network with specialists, facilitators and other beef producers. If you have any questions on further details of the program or would like to participate, please contact your local county ANR Extension Agent or the IRM Coordinator, Ben Crites, at benjamin.crites@uky.edu.

Beef Efficiency Conference: The 2017 Beef Efficiency Conference will be held in conjunction with the KCA Convention on January 19th. The program will take place from 8:30 to 11:30 a.m. ET in Heritage Ballroom 2 & 3 at the Lexington Convention Center. This is an excellent opportunity to hear from some of the leading specialists from different universities around the country. This year’s featured topics and speakers include: “Decision Making for Efficient Beef Production,” Dr. Tom Field from the University of Nebraska-Lincoln, “Current Status of Genomic Testing,” Dr. Jon Beever from the University of Illinois, and “Managing Pasture to Improve Soil Health,” Mr. Johnny Rogers from North Carolina State University. If you have any questions regarding the Beef Efficiency Conference, please contact Dr. Jeff Lehmkuhler at jeff.lehmkuhler@uky.edu or Ben Crites at benjamin.crites@uky.edu.

Cattlemen’s Bootcamp: Cattle producers are invited to gather for a Cattlemen's Boot Camp Feb. 17-18, 2017, at the Fayette County Extension Office in Lexington, Ky. The event is hosted by the American Angus Association in partnership with the University of Kentucky, and provides purebred and commercial producers timely information presented by academic and industry professionals.

Registration is [now available online](#)

(<https://www.angusonline.org/event/BootcampEntryForm.aspx?aci=CAAAAFcoy4ObRsdJUrZHX%2bSz9vY%3d>) and will be open until Jan. 16, 2017.

Cattlemen's Boot Camp events are engaging educational opportunities for both seedstock and commercial producers alike, says Chelsey Smith, Association assistant director of events and education. The day-and-a-half event is packed with industry speakers and reports on research with significant impacts on the beef business.

Open to all cattle producers, the event is funded by the Angus Foundation and features educational speakers and hands-on activities to help improve herd operations. The workshop is packed with pertinent information including bull selection, reproductive technologies, genetic markets, forage management and much more.

Registration is \$75 per person, and includes meals and educational materials. Registration forms are due Jan. 16, 2017, and can be [submitted electronically](#) or mailed to Smith at the American Angus Association, 3201 Frederick Ave., Saint Joseph, MO 64506. Late and walk-in registrations are not accepted.

Hotel rooms are available at the Four Points by Sheraton Lexington located at 1928 Stanton Way, Lexington, Ky., for \$94 plus tax until 5 p.m. EDT Jan. 17, 2017. Participants will need to contact the hotel at 859-259-1311 and reference the "American Angus Cattlemen's Boot Camp" to receive the rate. A complete schedule follows.

Friday, Feb. 17

7 AM – Registration

8 AM – Greetings & Introductions

- *Alex Tolbert, American Angus Assoc.*
- *Benjamin Crites, UK*

8:30 AM – It All Ends Here — *Chef Josh "Volare"*

9 AM – New beef cuts from the ribeye — *Gregg Rentfrow*

10 AM – Break

10:15 AM – Beef Market Update — *Kenny Burdine*

10:30 AM – Consumer Demand in a Changing Marketplace — *Mark McCully*

11 AM – Marketing? What's that mean? — *Alex Tolbert*

11:30 AM – Recap of the Morning — *Mark McCully*

Noon – Lunch

12:30 PM – Depart for Woodford Farm

1 PM – Breakout Sessions at Woodford Farm

- Live Selection with performance data — *Dan Moser/ Alex Tolbert*
- Visual ID/ Cattle Handling/ DNA Samples — *Ben Crites*
- Pasture Management/ Winter Feeding practices — *Steve Higgins*

3 PM – Depart for Fayette County Extension Office

4 PM – Cattle Selection in the Genomics Era — *Dan Moser and Darrh Bullock*

6 PM – Dinner

6:30 PM – Panel Discussion:

- Selection, Breeding and Genetics — *Les Anderson, Daniel Smith, Charlie Boyd and Joe Myers*
- Marketing: A Proactive Approach — *Jim Akers, Aaron Burke, Charlie Boyd and Joe Myers*

Saturday, Feb. 18

7 AM – Registration

8 AM – Maximizing Forage Production for Beef Cattle – *Ray Smith*

8:30 AM – Feeding Cows for Rebreeding – *Jeff Lehmkuhler*

9 AM – Getting cows bred — *Les Anderson*

9:30 AM – Keeping them healthy to maximize growth – *Michelle Arnold*

10 AM – Break

10:30 AM – Planning for success: a business and sound financial approach – *Rob Lawson with Thrivent Financial*

11 AM – Recap and Final Thoughts

11:30 AM – Depart for Home

ANGUS MEANS BUSINESS. The American Angus Association® is the nation's largest beef breed organization, serving nearly 25,000 members across the United States, Canada and several other countries. It's home to an extensive breed registry that grows by nearly 300,000 animals each year. The Association also provides programs and services to farmers, ranchers and others who rely on Angus to produce quality genetics for the beef industry and quality beef for consumers.

For more information about Angus cattle and the American Angus Association, visit www.angus.org.

The CPH Report – 2016 Summary

Kevin Laurent, Extension Associate, University Of Kentucky and Tim Dietrich, Kentucky Department of Agriculture

The CPH Report expands the analysis of CPH-45 sales to estimate the economic value of preconditioning calves prior to marketing. This report summarizes all CPH-45 sales held in calendar year 2016. Only sales of 200 head or more were included in this summary. Every attempt has been made to use as much actual data as possible in calculating these estimates (see the column descriptions below the tables for more details).

This analysis consists of two main components. First, is the **CPH Advantage** – which compares prices received in the CPH Sale to the average weekly statewide prices reported by the Market News Service of the Kentucky Department of Agriculture. Only large and medium frame muscle score 1-2 cattle in weight classes of 20 or more head were used in comparisons.

The second component is the **Estimated Net Added Value** – which compares the CPH Sale value of a calf with the estimated value of the calf at weaning. In these estimates we use a 60 day preconditioning period and an average daily gain of 2.5 lbs. per day. Calves with a calculated starting weight of less than 350 lbs were only given credit for 2.0 lbs of average daily gain. Costs incurred during the preconditioning period such as feed, health program, interest, death loss and differences in sales commission are subtracted from the added value to arrive at an estimated net return.

It should be noted that the Owensboro cattle are sold with a 2% pencil shrink and both Owensboro and Guthrie charge a lower commission for CPH-45 cattle than at their regular sales. Also note that the first three sales listed in this summary were calculated under the original 50 day preconditioning model.

More details on how these figures were calculated can be found in the column definitions below. Also, visit the CPH-45 website at www.cph45.com. If you are interested in selling in a CPH-45 sale, contact your local County Extension Agent for Agriculture and Natural Resources.

Estimated Net Added Value for CPH-45 Calves - 2016										
Sale Date	Sale Location	No Head	Wean Start Wt	Wean Avg Price	CPH WT	CPH Price	State Avg Price	CPH Advantage	Feed Cost Gain	Est. Net Add Value
1/20/16	Lexington	746	549	159.79	679	146.99	143.53	3.45	0.58	13.11
1/28/16	Guthrie	226	568	149.73	698	151.20	148.87	2.33	0.59	99.42
2/4/16	Owensboro	493	590	144.49	720	151.68	147.83	3.85	0.58	140.63
4/28/16	Owensboro	605	511	176.36	659	144.13	140.85	3.28	0.46	-31.31
6/15/16	Lexington	377	475	158.94	623	141.21	141.78	-0.58	0.44	32.71
7/11/16	Guthrie	875	540	156.41	690	135.32	135.35	-0.03	0.49	-4.56
8/11/16	Owensboro	983	510	154.98	666	155.15	145.93	9.22	0.48	138.57
12/1/16	Owensboro	771	533	111.31	683	125.65	115.53	10.12	0.54	162.57
12/5/16	Guthrie	1099	546	109.25	696	121.27	113.18	8.09	0.56	139.55
12/6/16	Paris	1468	482	110.96	637	121.01	115.28	5.73	0.49	112.17
12/6/16	Lexington	705	472	115.12	617	120.71	115.61	5.10	0.49	104.47
12/7/16	Richmond	1253	471	114.46	617	122.75	116.21	6.54	0.48	119.46
Weighted Average		9601	514	\$132.64	661	\$132.97	\$127.48	\$5.49	\$0.51	\$93.11

Column Definitions for summary charts

Wean Start Wt.	Average CPH weight minus 150 lbs.
Wean Avg Price	Average price of calves at weaning for the dates listed (60 days prior to CPH Sale).
CPH Weight	Average weight of the calves at the CPH sale.
CPH Price	Weighted average price of calves at the CPH sale held on the date listed.
State Avg Price	Weighted average price of calves as reported by KDA on the dates listed.
CPH Advantage	Difference between the CPH price and the state average price reported the week of the CPH sale.
Feed Cost Gain	Average cost of gain using average feed prices for the dates listed. An additional 10% was added to calculate heifer cost of gain.
Est. Net Add Value	The net returns per head after feed, vet/tag (\$12.00), mineral (\$3.75), commission (varies by sale), interest (6.0%) and mortality (0.5%).
Special Note	Labor and equipment costs were not included.

Free Fertilizer? Hay Feeding!

Dr. Jeff Lehmkuhler, Associate Extension Professor, Beef Extension Specialist, University of Kentucky

Pasture fields seem to be overlooked with regards to applying management. Many folks will soil test hay fields and apply some level of fertility, though it may be less than the soil test recommends. This seems to be more evident when profit margins are tight. Corn experts have recommended fertility rates in relation to economic returns rather than maximal yields. In other words, the rate of fertilizer added is based on both soil test recommendations and expected improvement in yield. This concept takes into account the cost:benefit relationship that exists for inputs and outputs. Should beef producers not have this same mindset when it comes to hay production and take this a step further toward pasture productivity?

Low feeder cattle price has reduced the profit margins increasing the importance to enhance forage production on the farm. With the understanding that tighter profit margins may lead to lower inputs devoted towards hay and pasture acres, is there another option?

A ton of hay that contains 2.5% potassium and 0.25% phosphorus would contain 50 lbs of actual potassium and 5 lbs of phosphorus. A ton of hay would then have the equivalent of 60 lbs of K_2O and roughly 11 lbs of P_2O_5 . Consider how many tons of hay you feed through the winter and the potential fertilizer value in this hay. Only a small amount of the potassium and phosphorus consumed by a cow is retained with most being excreted. Applying management to hay feeding areas can provide a source of nutrients that can improve soil fertility and forage production.

Applying management that distributes the animal pressure during the hay feeding period can reduce mud and spread these nutrients. This can be achieved through unrolling hay on the ground, using a hay processor and/or having bales offered in different areas of the field. The goal is to limit the time spent in any one area. Each of these options have advantages and disadvantages.

Bale grazing is gaining popularity in some regions. Bale grazing is simply the process of setting bales in a field area and controlling access to the bales. Access is often controlled using temporary electric fence. Bales would be set in the field prior to the expected hay feeding period. Bales are often placed on approximately 40' x 40' centers. The amount of hay consumed for the herd is estimated such that the cows will clean the hay up in 3-5 days. The number of bales offered will depend on bale weight and cow size, but a general rule of thumb is one bale (assuming 1,000 lb) per every 10 cows. If the herd is 30 cows, one would provide access to just 3 bales. These bales would be expected to be consumed in 3-4 days. Once the bales are consumed, the electric fence is moved to provide access to the next bales. Managing to reduce the amount of hay left behind is important. Protecting hay to minimize rot and waiting to give new bales to make cows clean up hay is key.

Research conducted in Virginia suggested that soil compaction, forage production, and the percentage of weeds in the field were not different in fields where hay was fed compared to fields that did not have hay fed. They did indicate that the areas around the hay feeding areas were damaged or denuded with these areas being approximately 5% of the field area. Soil phosphorus and potassium levels as well as the percentage of clover were increased in the fields with hay feeding. Canadian researchers found forage production was 3.3-4.7 times greater in fields in which hay feeding was conducted. Their research revealed significant increases in soil fertility in areas with hay feeding. Areas where bale grazing seems to be gaining traction is in areas that ground remains frozen during the winter. Another region it is gaining traction is in areas with sandy soils that are well drained. How will this fit our mud conducive climate?

In Adair county, one farmer has embraced this concept to improve pasture areas. It is a learning process and we are all learning from his management. Last winter, bales were placed close together. Significant soil disturbance occurred but the areas were seeded to a summer annual. Great production of these annuals were observed as the rapidly growing forage used the nutrients left behind. The areas were reseeded to novel fescue in the fall as part of the renovation plan. He reduced the amount of hay fed to about 2/3 bale for his 26 cows. He is using bale grazing again this winter. He has sold his manure spreader. Soil K and P levels were increased about three-fold in the hay feeding areas. An interesting observation is that no broomsedge was seen growing in the hay feeding areas while it was in the rest of the field.

Is bale grazing the solution? I am not convinced yet, but it has opened my mind to alternatives. Hay feeding certainly has the potential to be a source of fertility that I would argue many producers are wasting. Unrolling hay can be another option. Using a single strand of electrified poly-wire down the middle will lower loss from bedding and defecation.

Distributing hay feeding areas in pasture fields will improve animal distribution and manure deposits. Forage production may be improved as a result particularly for pasture fields that have not received fertilizer in years. We'll continue to look at this in the future to see how bale grazing will fit our climate.

Understanding the BVD Virus

Michelle Arnold, DVM (Ruminant Extension Veterinarian, UKVDL)

Concern is mounting in KY regarding the identification and subsequent movement of cattle persistently infected with the Bovine Viral Diarrhea virus (or "BVD-PI" animals) into livestock sales. The BVD virus is known to cause severe immunosuppression and also works synergistically with other viruses to make them more deadly, resulting in substantial respiratory disease and death loss in the stocker/backgrounder industry. What is largely unrecognized is the effect of a BVD-PI calf on the cow/calf operation where it was born or raised. Infection can cause reproductive disease (delayed breeding, abortions, malformed calves, PI calves), respiratory disease, enteric ("gut") disease and immunosuppression (destruction of the white blood cells needed to fight infection). This article addresses some of the common myths surrounding this virus by explaining the nature of the virus, its broad impact and the difficulty of controlling it through vaccination alone.

Myth #1: Since BVD is a virus, it does not last long in the environment and dies quickly when it freezes.

The BVD virus is a "single-stranded RNA virus" which is very stable under moist and cool or cold conditions. It is not affected by freezing and can easily survive at least a week in the right environment. Its enemies are soap and water and hot and dry conditions. It can only be spread short distances through large "droplets" (especially saliva and nasal discharge) and cannot be spread by the wind.

Myth #2: As a backgrounder, if the calves make it past 30 days after arrival and I have two rounds of vaccine in them, I am "home free".

Not necessarily. The BVD virus can easily mutate or change while reproducing itself and has the ability to pick up pieces of other viruses and stick them inside its own genetic material. This can lead to rapid change (mutation)

from a low virulence strain (not very “mean”) to a killer virus. If a PI animal remains in the pen, he continually sheds BVD virus that can mutate. Infection with this newly formed strain may result in a respiratory break after 30 days and can cause significant sickness and death. After infection, it takes an average of 14 days to clear the virus from a “transiently” infected calf but it may last up to 28 days or more.

Myth #3: PI calves are easy to identify because they are stunted, grow poorly and usually die young.

If it were only that easy! PI animals may have congenital defects or may appear completely normal. To illustrate, the prize-winning bull in the 2000 Wisconsin State Fair was tested and found to be a PI. The “PI” animals are the major reservoir for the virus and the reason BVD disease continues to exist. Given the importance of this issue, it is essential to understand what a “PI” truly is and how one is found. The problems begin when a pregnant cow or heifer is infected with the BVD virus between 42-125 days of gestation. The virus crosses the placenta, infecting the unborn calf. When this calf is born, it is “persistently infected” or a “PI” calf and can be considered a “carrier” of the virus for its lifetime. Most PIs are born to heifers who were naïve at the time of exposure. PI animals are the primary source of virus transmission because they shed an extremely high number of virus particles throughout their lives in feces, urine, saliva, nasal discharge, milk, semen, uterine secretions, and aborted membranes. The virus is deposited in watering troughs, feed troughs, cattle trailers-virtually everywhere the animal goes-and picked up by the other cattle in the pen or herd. Although it is often assumed PIs will die young, some survive well into adulthood and have calves or can be fed to slaughter weight.

Myth #4: I tested all of the calves born this year in my herd and found one PI calf. The vet euthanized the PI so my other calves (that all tested negative) should be fine.

One PI calf usually indicates big problems on a cow/calf operation. Any fetus infected while in the uterus by the virus but did not become a PI will still not be normal. The virus commandeers cell functions to produce more virus that normally are used for fetal development of immune tissue. The virus destroys endocrine tissue and may destroy 20-80% of the thymus gland, an important driver of immune function in calves. These calves will have increased respiratory disease, poor performance, and reproductive issues if they reach sexual maturity. Bulls infected before sexual maturity may have BVD virus persist in the testes and produce BVD-infected semen.

Myth #5: BVD-PI is a problem for the backgrounder; there is really no economic benefit to a cow/calf producer to find a PI calf in his/her herd, especially if forced to euthanize a positive calf.

Bottom line: if **one** PI calf is out in the pasture constantly shedding virus during breeding season, many (if not all) of the cows/heifers will be exposed to the virus during the highest risk time that may result in very expensive clinical herd problems such as:

1. Poor reproductive performance/ rise in infertility (despite good nutrition and fertile bulls)
 - a. Decrease in overall pregnancy rate and % pregnant after the first service. This “delayed breeding” is often blamed on the AI technician, a dud bull or hot weather when really it is a viral problem.
 - b. Abortions, stillbirths, neonatal deaths, and weak calves
2. Physical abnormalities (dummy calves, eye defects, cleft palate) in neonates
3. Calf loss due to pneumonia or scours before weaning

Other possible sources of the BVD virus in a cow/calf herd include introduction of new cattle (including bulls) into the herd without testing for BVD, fence line contact with feeder calves or the neighbor’s herd, and populations of wild animals (such as deer) on the farm. Show cattle can bring the virus back when they return to the farm. A calf purchased from a sale to put on a cow who lost her calf at birth may be PI. A purchased pregnant cow or heifer may be negative for BVD yet she is carrying a PI calf.

Myth #6: I vaccinate my cows annually against BVD so my herd is fully protected.

Unfortunately, no. Vaccines against BVD (including those with Fetal Protection claims or “FP” vaccines) will reduce the chance of fetal exposure but protection is never 100%. Vaccines may fail due to problems with the vaccine itself, the animals, and/or management errors. The current BVD vaccines available contain BVDV 1a and BVDV2a strains. These vaccines were quite effective when strains 1a and 2a were the most prevalent types. However, the

most common type of virus circulating now on farms in the US is BVDV1b so the vaccines are not as protective. Problems within the animals themselves may prevent good vaccine response. Animals that are sick when vaccinated, too stressed to respond, in poor nutritional status or too young to produce antibodies will not be protected with vaccination. A PI calf within a herd will suppress immune response from vaccine in all of the other calves it contacts. Finally, yet importantly, management errors are an all-too-common cause of vaccine failure. These may include:

- Not giving 2 doses of killed vaccine as described on the label
- Improper mixing of vaccine (shaking violently rather than swirling)
- Failure to use modified live vaccine within 1 hour of mixing (VERY COMMON ERROR)
- Inappropriate storage either before or during use of the product (must be kept cool)
- Use of expired vaccine
- Use of soap, detergent, or disinfectants to clean the inside of multi-dose syringes used to inject modified live vaccine (inactivates vaccine)
- Poor timing: The immune system needs two weeks to develop a protective response from a vaccine before challenged with the virus.

Diagnostic testing for BVDV PI is inexpensive and easy. The most commonly used sample for identifying PI cattle is skin, usually taken as an ear notch. Blood (serum) can also be used but not in young stock (calves less than 3 months old). Any BVD ELISA positive test result (at the UKVDL) should be confirmed by segregating the animal and retesting a second ear notch or blood drawn at least 3 weeks after the first sample. True PI animals will still be positive after 3 weeks while transiently infected will test negative. Other laboratories may have different protocols so check the laboratory on the need for confirmatory testing. *Remember PIs are considered defective and there is a legal, moral and ethical obligation to dispose of these animals without sending/returning them to commerce.*

If you have questions, please contact Dr. Michelle Arnold at 859-257-7190.

Much of the information in this article was from a recent webinar by Dr. Julia Ridpath, an internationally-recognized expert in bovine respiratory disease and BVD. This webinar was made available to extension veterinarians to help educate all parties involved in cattle production on the many faces of this disease.

Forage Update

Dr. Ray Smith, Extension Professor, Forage Extension Specialist, University of Kentucky

Upcoming Events (www.uky.edu/Ag/Forage)

JAN 18-19 Heart of America Grazing Conference, Quincy, IL

JAN 20, 2017 Forages at KCA, Lexington, KY

JAN 22-24, 2017 AFGC Annual Meeting, Roanoke, VA

Kentucky Alfalfa Conference Expanded to include Stored Forages and Summer Grazing Options

The 36th Annual Kentucky Alfalfa and Stored Forages Conference is scheduled for Tuesday, February 21st at the Cave City Convention Center in Cave City, KY. Keynote speakers will be Dr. Dennis Hancock, Univ. of Georgia Forage Specialist and our new Kentucky Forage Extension Specialist in Princeton, Dr. Chris Teutsch. Chris comes to us with 16 years of experience as Forage Specialist in Virginia and as one of the leading forage experts in the country. He has conducted groundbreaking research on the relationship between yield and quality of warm season annual grasses.

Full Program:

8:00 (CST) Registration and Exhibits

8:45 Welcome - Dr. Ray Smith, University of Kentucky

9:00 **Hay Making Weather in Kentucky: How to Get Good Information** - Dr. Matthew Dixon, UK

- 9:20 **Understanding and Improving Fermentation in Alfalfa and Grass Baleage** - Dr. Dennis Hancock, Univ. of Georgia
- 10:00 Break, Exhibits and Silent Auction
- 10:30 **Why is Intake Reduced When Cattle are Fed Tall Fescue?** - Jimmy Klotz, USDA-ARS-FAPRU
- 10:50 **Hay Production: East vs. West** - Tom Keene, UK
- 11:10 **What's New in Seed Coatings?** - Bill Talley, Summit Seed Coatings
- 11:30 **The Economics of Forage Quality** - Dr. Kenny Burdine, UK
- 12:00 Lunch, Exhibits and Silent Auction
- 12:50 KY Alfalfa Awards
- 1:20 **Selecting Summer Annual Varieties Using Yield and Digestibility** - Dr. Chris Teutsch, UK
- 2:00 **Producer Panel**
- 3:30 Adjourn

For more information or to register for the event, visit www.uky.edu/ag/forage. Exhibit space is also available.

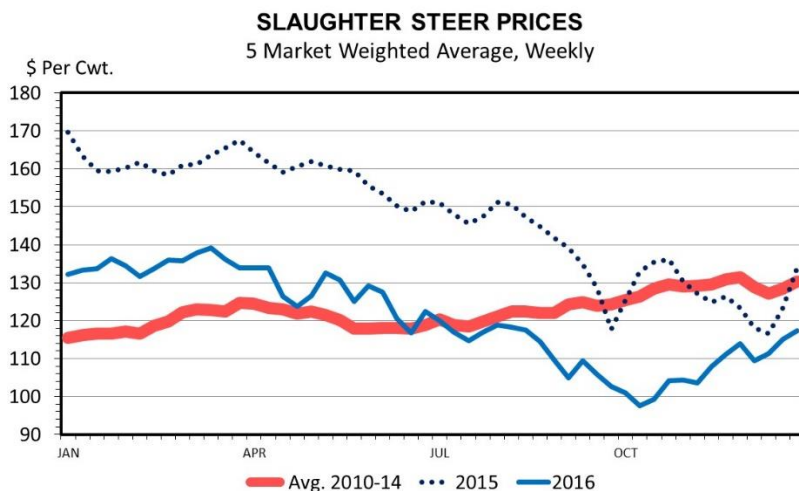
Novel Tall Fescue Renovation Workshop to be held in Lexington March 9th

The University of Kentucky has partnered with the Alliance for Grassland Renewal to host a one day Novel Tall fescue Renovation Workshop on March 9th. The event, a duplicate of successful events in Oklahoma and Missouri, will provide producers with the tools and information to renovate toxic pastures and manage new stands of novel tall fescues. Speakers include local producers, company representatives and researchers from across the country. Classroom sessions will be held at the UK Veterinary Diagnostic Laboratory and hands-on activities will be conducted at the UK Spindletop Research Farm, both in Lexington. Early bird registration (\$60) includes refreshments, lunch and educational materials. More information and Registration can be found at www.kyfescue.eventbrite.com.

Kentucky Beef Cattle Market Update

Dr. Kenny Burdine, Livestock Marketing Specialist, University of Kentucky

Fed cattle markets have sustained their improvement since fall with fed cattle trading around \$117 for the week ending January 6, 2017. This is nearly a \$20 per cwt improvement from their fall lows (see chart below). CME© Feeder Cattle futures have risen by roughly the same amount over that time. In Kentucky, 550 lb M / L #1-2 steer calves have been moving in the \$120's with value-added groups selling in the \$130's. 750 lb M / L \$1-2 steers in KY have traded in the mid-\$110's, again with higher quality groups about \$10 per cwt higher.



Source: USDA-AMS, Livestock Marketing Information Center

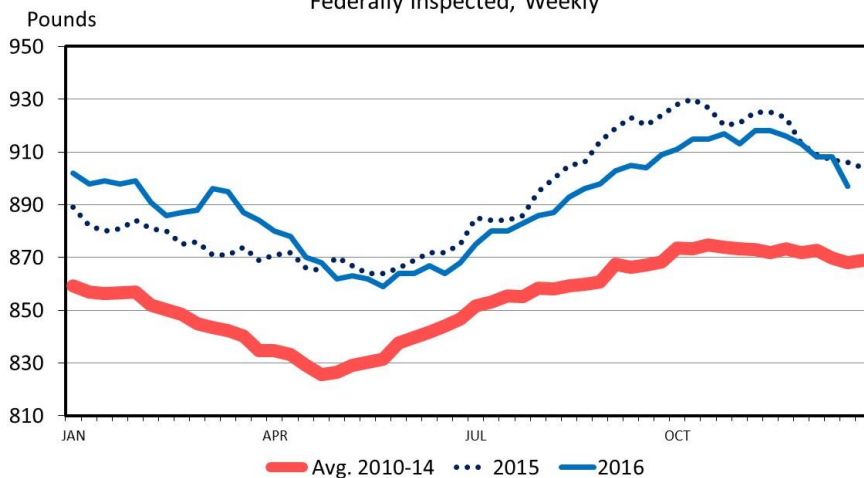
Last month, we discussed price slides and some things that we are seeing with cattle prices by weight. Next month, I will be able to discuss USDA's January 1 cattle inventory report and what it might mean for 2017.

This month, I thought it might be interesting to re-visit harvest weights since this has been a major topic since fall of 2015.

The following chart shows steer dressed weights for the last couple of years. Note that dressed weights reached a high of 930 lbs in October of 2015. Using a 62% dressing percentage, this would equate to a 1,500 lb live steer. That same week in 2016, average steer dressed weight was 915 lbs, or a 1476 lb live steer. One can easily see from the charts that while weights have decreased some from 2015, they remain extremely high by historical standards.

From my perspective, there are likely three major reasons why harvest weights remain high. First, lower feed prices encourage more feeding holding everything else constant. That's an easy one to understand and was clearly a factor for much of the last couple years. Secondly, lower feed prices likely worked in tandem with the general downward price trajectory for much of 2016. Put simply, this provided little incentive for feedlots to remain current and resulted in more days on feed. Finally, there were more feeder cattle placed on feed at heavier weights during 2016. The number of cattle placed on feed weighing more than 700 lbs was higher year-over-year in 2016 for each month January through August. Cattle that are placed on feed at heavier weights will tend to finish at heavier weights. This is a factor that will continue to at play through spring 2017.

STEER DRESSED WEIGHT
Federally Inspected, Weekly



Source: USDA-AMS and USDA-NASS, Livestock Marketing Information Center