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OFF THE HOOF

Kentucky Beef Newsletter – December 2012

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

Contents

This month's newsletter includes:

Timely Tips

Dr. Roy Burris, University of Kentucky Beef Specialist

SPRING CALVING HERD

- Be sure that weaned heifer calves are on a feeding program which will enable them be at 65% of their mature weight before the start of the breeding season. Rations should be balanced to achieve gains sufficient to get heifers from their current weight to that "target" weight.
- Body condition is important, plan an adequate winter program for cows to be at least body condition score 5 (carrying enough flesh to cover the ribs) before the calving and breeding season. This will help them to breed early in the spring. Thin cows should be fed to regain body condition prior to winter. Don't let cows lose weight/condition.
- Divide the herd into groups for winter feeding --
  - -weaned heifer calves
  - -first-calf heifers, second-calvers and thin mature cows
  - -the remainder of the dry cows which are in good body condition
  - -herd sires
- Begin feeding the lowest quality forage to dry cows which are in good condition during early winter and save the best hay for calving time or for weaned calves.
- Order and number eartags for next year's calf crop this winter. It is also a good time to catch up on freeze branding and replacing lost eartags.

FALL CALVING HERD

- Have Breeding Soundness Evaluation (BSE) performed on bulls (even if you used them this spring).

- Get breeding supplies together, if using estrous synchronization and/or A.I.
- The fall breeding season starts. Breeding can best be accomplished on stockpiled fescue pasture; otherwise, cows with calves should be fed 25-30 pounds of good quality hay or its equivalent. Supplement with grain, if needed, and minimize hay waste. Cows shouldn't be allowed to lose body condition.
- Observe performance of bulls during breeding season. Watch cows for return to estrus, if you see several in heat, try to determine the cause and consider changing bulls.

GENERAL

- Complete soil testing pasture to check for fertility and pH.
- Consider putting down geotextile fabric and covering with gravel in feeding areas before you begin hay feeding to minimize waste of expensive hay.

By-product Feeds for Weaned Calves

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

I've mentioned previously that I think that by-products will have a greater role in feeding beef cattle in the future. I also believe that retaining ownership of calves for a post-weaning feeding period has a lot of potential for cow-calf producers and benefits the beef industry. It follows that we would be interested in feeding by-product feeds to weaned calves.

I've been involved in a lot of work with soyhulls (a by-product of the soybean "crush" for oil) which has shown favorable results. We can also add distillers grain (a by-product of ethanol production) to soyhull diets to raise the protein to a more desirable levels. But what about adding glycerin (a liquid by-product of biodiesel production from soybeans) to increase the energy density of the feed? After obtaining glycerin from Andy Sprague of Union County Biodiesel Company, we conducted two feeding trails to evaluate glycerin as a component of an all by-product feed after calves were trained to electronic feeders.

Trial 1

Twenty heifers were allotted to one of three treatments (supplements) consisting of 70% soyhulls and 20% dried distillers grain (DDG) with the extra 10% coming from either soyhulls, glycerin or corn. Heifers were individually-fed their assigned supplement in electronic Calan® feeders. Results of the 84-day trial are shown in Table 1. Heifers were given free-choice access to their supplement for the first 28 days – but intake was restricted thereafter because we didn't want them to get too fat. Heifers which received the glycerin supplement gained more during the first 28-days of the trial and overall gains were similar for the 84-day trial, indicating that glycerin can replace corn or soyhulls in 10% of the supplement.

Table 1. By-product Supplements for Beef Heifers.				
	10% of Supplement from:			
Item	Soyhulls	Glycerin	Corn	P – value
Calves, no	6	7	7	-
Avg. Init. Wt., lb	700	689	693	-
Avg. Daily Gain, lb				
Day 1 – 28	3.91[a]	4.73[b]	3.93[a]	0.04
Day 1 – 84	2.67	2.78	2.70	NS
Avg. Feed Intake, lb				
Day 1 – 28	23.9	26.0	24.9	NS
Day 1 – 84	20.0	21.1	20.3	NS
Feed/Gain, lb				
Day 1 – 28	6.2	5.6	6.5	0.21
Day 1 – 84	7.6	7.7	7.6	NS

Note: Heifers were allowed ad libitum intake of supplement with two lbs. of cottonseed hulls for the first 28 days then intake was restricted to 1.75% of bodyweight thereafter.
NS = not significant

Trial 2

Twenty-two steers were used in a 43-day trial to compare the "glycerin" supplement used in trial 1 to a commercial supplement. Both supplements contained minerals and an ionophore. Results are shown in Table 2. Calves fed the by-product mix performed as well as those receiving a commercially available feed (13% crude protein with lasolocid).

Summary

These data indicate that glycerin can replace other forms of energy supplementations at about the 10% level of the diet for feeder calves. Glycerin, a liquid, is also a good conditioner for dry, milled supplements and it should be available at about one-half the cost of other energy feeds, providing a good alternative feedstuff. Methanol must be removed from crude glycerin before it is fed. It then seems to become a very acceptable feedstuff. Give Andy Sprague (270/952-1850) a call if you are interested in learning more about glycerin.

Table 2. Performance of individually-fed (ad lib) steers fed a commercial or home-made mixture (43 days) 2011-2012.			
	Feed		
	Commercial[a]	By-product mix[b]	P - value
Steers, no	11	11	
Initial wt, lb	729	729	
Average daily gain, lb	4.49	4.79	NS[c]
Feed intake, lb	24.6	24.2	NS[c]
F/G ratio	5.5	5.1	NS[c]

[a] Commercial preconditioning feed (13% CP) with 2 lb of grass hay.
[b] 68.75% soyhulls, 20 DDG, 10% glycerin and 1.25% mineral with Rumensin @ 1620 g/T.
[c] NS = not significant

Can We Rebuild the Beef Cow Herd? Part 1

Dr. Derrell Peel, Oklahoma State University Extension Livestock Marketing Specialist

That was the question posed to me by a producer in response to my recent article suggesting that two years of drought liquidation, on top of previous liquidation, has pushed the beef cattle inventory so low that we are effectively "out of cattle" in terms of our ability to maintain beef production and rebuild the cow herd.

This producer specifically noted two issues that will affect the ability of the beef industry to rebuild: the loss of forage land to non-agricultural (development and recreational) uses; and the conversion of pasture to crop production.

While these and other issues pose significant challenges to rebuilding the beef cow herd, I do believe there is ample capacity to rebuild the cow herd according to the demands of the market. That said, the question of how and where it will done is likely to be different in the future than in the past.

In the short run, the drought is, of course, the major factor affecting herd liquidation. Until forage conditions improve, the question of herd rebuilding is a moot one. And while there is no current indication of improving drought conditions, nor any guarantee that conditions will improve, it is likely that some regions, at least, will see improving conditions in the coming months.

The more regionally specific drought in 2011 caused a 1.07 million head decrease in beef cows in a single year in Texas, Oklahoma and the surrounding states. Much of this region is still in severe drought, with some areas, such as Arkansas, in considerably worse shape in 2012 than in 2011. There has been some improvement in drought conditions in parts of east Texas but little if any herd rebuilding has taken place yet. Most all of this loss in beef cows can be recovered post-drought, though some parts of the region will take several years to fully recover.

The impact of the 2012 drought has yet to be documented until the next USDA cattle inventory report is available. I expect to see another 400 to 500 thousand head decrease in the beef cow herd, spread across several states.

I suspect this reduction represents extra heavy culling of the cow herd and fewer heifers entering herds rather than the deep herd culling or herd dispersals that occurred in 2011. Nevertheless, this is additional herd capacity that can return rather quickly with improved forage conditions.

Land use issues affecting the beef industry reflect long-term trends and on-going structural changes in U.S. agriculture. Concerns about development and recreational use of forage lands are common and understandable among many cattle producers. Certainly in some areas, the loss of pasture to small acreage development or for other non-agricultural uses is significant and noticeable.

However, about 30 percent (571 million acres) of the total U.S. land area of 1.93 billion acres is rangeland, pasture or non-cultivated cropland (mostly hay). No doubt this includes some land used for recreation despite being designated as agricultural.

Another 810 million acres (42 percent) is forestland or federal land, a significant portion of which is grazed or partially grazed by livestock. Thus, a majority of some 1.381 billion acres (72 percent) of the total land in the country is used exclusively or partially for livestock, mostly cattle, production.
This compares to 305 million acres (16 percent) used for crop production; 33 million acres (1.7 percent in the Conservation Reserve Program); 111 million acres (5.7 percent) developed; and another 5.2 percent in water surface and other rural uses. Land used for development increased nearly 17 million acres from 1997-2007.

Land diversion away from agriculture is not a trivial matter but does not represent a significant barrier to potential rebuilding of the cow herd, at least not on a national basis.

The implications of this issue certainly vary in some regions and are part of a broader set of regional changes in agriculture that will affect the beef industry in the future. The next installment of this article will discuss how and where beef cow herd rebuilding will take place.

Can We Rebuild the Cow Herd? Part 2

Dr. Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

A dramatic jump in demand for corn, which began in late 2006, has resulted in sharply higher prices for all crops in the US. A simple average across the eight major cultivated crops shows that 2012 crop year prices are expected to be 165 percent higher than in 2005. This has provoked intense competition among crops for land resources with crop market prices doing short term battle each year for acreage to plant. The epicenter of this crop frenzy is naturally in the Midwest and is reflected in the phenomenal jump in land values and rental rates in the region.

Longer term impacts on land use are also expected as a result of this new agricultural environment. Though data is limited, there are strong indications that these long term changes have begun and they have significant implications for the beef cattle industry. The 2007 Natural Resources Inventory (NRI) showed that in addition to 305 million acres of cultivated cropland, an additional 119 million acres are used for pasture along with 52 million acres of non-cultivated cropland (mostly permanent hay). These 171 million acres of pasture and "hay" land are arable, meaning they can be farmed. A majority of these acres occur in

an around the major cropping areas and generally in the eastern half of the country. These acres do not include another 400 million acres of rangeland (plus forest and federal lands) that are not arable. Rangeland is mostly located in the drier central and western regions of the U.S.

Though converting perennial pasture and hay crops to cultivated crops is not an easy or quick process, high crop prices will logically attract some of these acres for cultivated crop production over time. At this point there is little data to confirm how much pasture and hay land is being converted to crop production. The 2012 NRI and Agricultural Census data (which will be available in several months) are expected provide the first documentation of a process that is likely to continue for many more years.

In the absence of land use data, changes in cattle inventories across states already indicates some of the anticipated regional impacts of high crop values. From January 1, 2007 to 2012, the U.S. beef cow herd decreased by 2.76 million head or 8.5 percent. The decrease is much more pronounced in the Midwest and surrounding regions, including the states of Illinois, Indiana, Iowa, Minnesota, Missouri, Kentucky and Tennessee. In these states, the five year decrease in beef cow inventory ranged from 11.4 percent to over 22 percent with an average of a 14.2 percent decrease. By contrast 12 states in the Great Plains and Rocky Mountain regions experienced beef cow herd changes that ranged from an increase of five-plus percent to a 7.5 percent decrease with an average of 2.6 percent decrease across the region. Texas and Oklahoma experienced sharp decreases from 2011 to 2012 due to drought but had a similar 3.1 percent decrease in the 2007-2011 period. This indicates that the beef cow herd is decreasing more rapidly in regions where competition with crops is greater. As a result, an increasing share of the total beef cow herd will be located in drier regions of the country in the future. Interestingly, this same phenomenon is occurring in other major beef producing countries such as Brazil, Argentina, Uruguay and Paraguay and for the same reasons.

Depending on their location, it is not surprising that some cattle producers see less potential for herd rebuilding than others. Beef cow herds are less likely to rebuild in major crop production regions while predominantly forage areas have considerable potential for herd expansion. There is little doubt that some of the most productive pasture and hay land is being converted for crop production which highlights the challenge of rebuilding the beef cow herd in more marginal areas. However, high crop prices increase forage value as well and that changes the incentives for how land is used and managed. Forage production, even on rangeland that does not compete directly with crop production, is worth more now. Many years of cheap grain kept forage values low and the result is that forage production and use has not been managed as efficiently as it can be.

Increased forage value opens up a wide variety of possibilities, in many regions, to manage forage for greater productivity and to manage forage use more efficiently. The dramatic increase in use of corn crop residue the last two years is one example of the response to these incentives. Two other examples include reducing hay wastage from round bales and, in Oklahoma and similar areas, more Red Cedar control to increase forage production. In many regions of the country there is considerable potential for adoption of new forages and new forage systems to increase cattle production and/or extend grazing seasons.
This continuing discussion of the challenges and opportunities for rebuilding the U.S. cattle herd will continue in Part 3 with a discussion of who will rebuild the cow herd.

Implications of the Fiscal Cliff

Dr. John D. Anderson, Deputy Chief Economist, American Farm Bureau Federation

Let's take a quick look this week at an issue of some relevance to the demand side of the market: the direction of the general economy. A couple of recent reports indicate that the economy appears to be - still - fairly fragile.

Last week, the National Restaurant Association released their widely-followed Restaurant Performance Index (RPI) for October. The RPI is of particular interest to the beef industry since so much beef is consumed away from home in food service settings, but it is also of more general interest as an indicator of consumer sentiment in the broader economy. The most recent RPI release generated a bit more attention than normal because the RPI fell to a value of 99.5 - its lowest level in 14 months. RPI values below 100 suggest that the restaurant trade is experiencing or is anticipating a contraction in business. The press release from the National Restaurant Association accompanying the RPI indicated that restaurant operators had become decidedly more pessimistic in their short-term outlook. Also on the topic of pessimism in the short-run outlook, the Institute of Supply Management released a widely-followed monthly indicator on Monday this week: the ISM Purchasing Managers Index (PMI). This index summarizes the activities of the purchasing managers (the people who buy the raw materials) for manufacturing firms and is thus considered a leading economic indicator. The PMI for November fell below 50 in November, indicating contraction in the sector. At 49.5, the PMI posted its lowest reading since July 2009 and was well below expectations that it would hold steady for the month at just under 52.

One of the major sources of uncertainty in the economy right now is the direction of federal fiscal policy. As anyone who has not just awakened from an 18 month coma knows by now, the federal government is facing the automatic implementation of substantial tax increases and spending cuts at the end of the year - the Fiscal Cliff. The fiscal cliff actually results from the convergence of a number of related policy tracks. Partly it is the endgame for the Budget Control Act of 2011 (BCA). According to the terms of the BCA, if an ad hoc congressional super-committee (the Joint Select Committee on Deficit Reduction) failed to devise and pass through the full Congress a revenue package that would reduce the deficit by $1.2 trillion dollars over ten years, a pre-established set of spending cuts would automatically kick in on December 31, 2012. Shockingly, Congress did, in fact, fail to agree to an acceptable package, and now the automatic provisions are about to kick in. Partly the fiscal cliff is a consequence of the scheduled expiration of the Bush-era tax cuts and of the temporary payroll tax cut. These cuts weren't part of the BCA, but due to some perplexing policy choreography, their expiration coincides with the BCA's sequestration provisions. Finally, the Affordable Care Act included some revenue-raising tax code changes that were scheduled to kick in at the beginning of 2013, just in time to join the Bush tax cut expiration and the BCA's automatic spending cuts.

Leaving aside questions on the merits of any of the particular policies comprising the fiscal cliff, it is clear that the combined tax increases and spending cuts all taking effect at once would represent a significant shock to the economy. In a report on the issue released in early November, the Congressional Budget Office (CBO) estimated that the combined effect of the tax increases and spending cuts in sequestration would be sufficient to push the economy back into recession in the first half of 2013, resulting in a decline in GDP for next year of about 0.5%.

A return to overt economic contraction would be a step down from our present position of barely-perceptible recovery. But we really don't have to go off the fiscal cliff to get a glimpse of its effects. Markets are anticipatory - market participants' expectations of the future influence today's decision

making. For this reason, the risk of a looming fiscal crisis is already affecting the economy. Federal Reserve Board chairman Ben Bernanke made that point clearly a few days ago in a speech to the New York Economic Club:

"Uncertainty about how the fiscal cliff, the raising of the debt limit, and the longer-term budget situation will be addressed appears already to be affecting private spending and investment decisions and may be contributing to an increased sense of caution in financial markets, with adverse effects on the economy. Continuing to push off difficult policy choices will only prolong and intensify these uncertainties."[1]

The recent declines in the forward-looking RPI and the PMI indicators suggest that Chairman Bernanke is on to something. It is a mistake to think that the current political/fiscal uncertainty hasn't already cost us something. It has. But it could get worse. The issue truly is a thorny one, as Bernanke points out. Something has to be done to improve the country's long-run fiscal situation: current deficits are not sustainable and will inevitably choke off economic activity at some point. However, moving too aggressively on the issue could substantially set back an already fragile economy - making our fiscal problem even harder to deal with in the short run. As of this writing, there is no indication at all how this delicate situation will be resolved. No doubt, Congress and the White House are hard at work on it, but so far the conversation is generating a lot more heat than light. The positions of the President and the Speaker of the House seem to be about the same as they have been for over a year now. At some point, somebody has to come up with something new. Bear in mind, though, that the last brilliant idea for addressing these issues was the Fiscal Cliff that we are all wringing our hands over now.

On a happier note, since this is my last ICM contribution of the year, I would like to take the opportunity to wish everyone a Merry Christmas.

[1] Bernanke, Ben S. "The Economic Recovery and Economic Policy." Speech to the New York Economic Club, November 20, 2012, New York, NY. Online at http://www.federalreserve.gov/newsevents/speech/bernanke20121120a.htm.

New Research in the Diagnosis and Treatment of Neonatal Calf Diarrhea

Dr. Michelle Arnold and Dr. Cynthia Gaskill, University of Kentucky Veterinary Diagnostic Laboratory

Diarrhea in neonatal calves is one of the leading causes of morbidity (sickness) and mortality (death) in North America and Europe and continues to be a major cause of economic loss to the beef cattle industry. There are five major infectious causes of diarrhea in calves less than 21 days of age: *E. coli* K99, rotavirus, coronavirus, Cryptosporidia, and *Salmonella* species. Noninfectious factors such as insufficient or poor quality colostrum, poor sanitation, stress, and cold weather can cause or contribute to neonatal calf diarrhea as well. Regardless of the cause, diarrhea results in increased loss of electrolytes and water in the feces of calves and decreases milk intake. Ultimately, this process causes dehydration, metabolic acidosis (the blood is more acidic than it should be), electrolyte abnormalities including sodium deficiency, and a negative energy balance from the lost nutrients and lack of milk. Oral electrolyte solutions have typically been used to replace fluid losses, correct acid-base and electrolyte levels in the blood, and provide nutritional support with the added benefit of being relatively inexpensive and easy to administer. Recent research has elicited better methods to assess and treat a calf with diarrhea as well as better guidelines for choosing an oral electrolyte solution. Faster and more accurate diagnostic tests have also been developed to uncover the underlying cause of the diarrhea. Rapid diagnosis is critical to develop the best treatment options and to prevent future outbreaks.

Accurate assessment of a calf with diarrhea is necessary to determine if oral fluid therapy is adequate or if intravenous (IV) fluids are indicated. The choice depends on determination of two important factors: 1) the severity of the dehydration and 2) the severity of the metabolic acidosis or low pH of the blood. Dehydration is relatively easy to monitor by examination of the position of the eyeball and by skin elasticity or the "skin tent" test. The degree of recession of the eyeball in the orbit (how far the eye is "sunken in") can be estimated by gently pulling the lower eyelid down and measuring the distance between the eye and the socket. If the distance is greater than 0.2 inches, dehydration is considered to be more than 8% and IV fluids are needed. Likewise, if the skin is pinched on the side of the neck and rotated 90 degrees then released and the time for the skinfold to disappear is greater than 6 seconds, the calf is considered greater than 8% dehydrated and in need of intravenous fluids. Although these measurements are somewhat subjective and may occasionally be inaccurate, they are by far the most accurate clinical indicators of dehydration that can be easily measured in the field. Conversely, field methods to assess acid-base status are not as good because they are based on a "depression" or "demeanor" score to predict the level of acidosis. Calves often have other concurrent metabolic problems that cause depression so these scores may be incorrect in complicated cases. Two parameters are important to assess: 1) the ability to stand (strong, weak or wobbly, down or recumbent) and 2) the ability to suck (strong, weak or slow, or no suckle reflex). In general, a standing calf with a strong to moderate suckle reflex or that demonstrates a "chewing action" should be given oral fluids. Any calf with a very weak or absent suckle reflex should be given IV fluid therapy because, if oral fluids are given to a calf with ileus (no gut motility), the fluid is not absorbed but instead pools in the rumen resulting in bloat and/or rumen acidosis. ANY calf that is severely depressed and unable to stand requires intravenous fluids.

The question often arises whether to allow a calf treated with oral electrolytes to continue nursing. Some experts used to recommend a "rest the gut" approach, suggesting that continued milk feeding worsens diarrhea. However, research has shown that milk feeding does not prolong or worsen diarrhea, nor does it delay healing of the intestines. Calves should be maintained on their full milk diet (continue nursing) plus oral electrolytes when possible as long as they exhibit diarrhea. Damaged intestines need metabolic fuel to optimize repair and milk provides a readily available source of nutrition to facilitate that repair. In addition, milk is more energy dense than electrolytes so continued milk feeding minimizes weight loss associated with prolonged bouts of diarrhea. If calves are depressed and refuse to nurse, a hypertonic oral electrolyte product such as Calf-Lyte II HE or Enterolyte HE can be used but, if milk feeding is not resumed within 12 hours, blood glucose concentrations will drop too low and the calves will get too weak to respond to oral treatment alone.

Calves with diarrhea, regardless of the cause, will usually have an overgrowth of the *E. coli* bacteria in the small intestine that can be absorbed into the bloodstream and cause systemic signs of illness including fever, loss of appetite, and lethargy. Injectable antibiotics and injectable nonsteroidal anti-inflammatory agents (NSAIDs) such as Banamine® are recommended in calves showing these signs. Work with your veterinarian to choose the products that will work best in your herd outbreak. Currently there is no research evidence to support the use of corticosteroids, motility modifiers, immunostimulants, intestinal "protectants" or "absorbants", or probiotics for calf diarrhea.

Improved diagnostics are now available to ascertain the cause of neonatal calf diarrhea. The UKVDL has recently developed a Calf Diarrhea Multiplex PCR panel (cost of $50 plus a $10 accession fee) which tests for the major diarrhea pathogens in calves less than 21 days old including: *E.coli* K99, Rotavirus, Coronavirus, *Salmonella* spp., and Cryptosporidia from one fecal sample submitted early in the course of disease and before any treatment is instituted. It is highly accurate as it detects the DNA or "molecular fingerprint" of the various pathogens and results are available within 1-2 days. A culture of the bacteria is

also recommended (an additional $15) in order to identify which antibiotics will work best against bacterial agents. At least 5 grams of feces must be submitted in a labeled, leak-proof container maintained at a cold temperature during transport. Do not submit fecal samples in gloves; screw cap tubes or vials are preferred in the laboratory.

Call the UKVDL (859) 257-8283 or check the website http://vdl.uky.edu for more information.

Kentucky Beef Cattle Market Update

Dr. Kenny Burdine, Extension Specialist in Ag Economics, University of Kentucky

As we approach the end of the year, calf markets have remained pretty steady since fall and a bit stronger than mid-summer. For the first week of December, 500 to 600 lb feeder steers averaged around $145 per cwt in Kentucky auction markets. The same week, there was a great deal of variation in heavier feeders, but groups of 7wt and 8wt steers generally traded in a range from the mid-$130's to the low $140's. This is a feeder cattle market driven by two primary factors – tight supplies and expensive feed. With spring feeder cattle futures on the board in the low-mid $150's, winter backgrounders are likely being tempted by gross margins in the $350 to $400 range. Slightly lower feed prices over the last few months have also improved expected returns to winter programs.

As we look towards the spring of 2013, a tight supply of calves will provide solid support, as will strong fall feeder cattle contracts. It's hard not to imagine a spring 2013 market comparable to what was seen in the spring of 2012. Many backgrounders were paying $1,000+ for calves this spring and I would expect something similar for large, high quality groups once again.

If we stretch a bit further and think about next fall, I think the market signals point to continued strength. First, there will be fewer calves born this spring as I expect beef cow numbers to be down when USDA releases their January 1 inventory estimates next month. There is also the possibility that we could see some interest in expansion next year, which would pull some heifers off the market. And, current corn futures suggest that if weather cooperates (the wildest of all wildcards), we should see slightly lower grain prices next year. So, while many things could impact markets in 2013 and prices are likely to decline seasonally from their grass driven highs in the spring, I would expect the fall 2013 market to be stronger than the market that we saw this fall.

Kentucky Auction Prices
500 to 600 lb Medium / Frame #1 Steers