

# CU *in the Pasture*

Clemson Livestock &amp; Forages Newsletter

Issue 7, April 2018

## Fly Control is Imperative in Our Beef Cattle Herds

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Clemson Extension Beef Specialist



Photo from "Managing Horn Flies, Dave Boxler  
<http://newsroom.unl.edu/announce/beef/6527/37663>

It will soon be that time of year that flies are starting and as you know it will only get worse. With wet weather in some areas you can see even more fly pressure. The good news is as an industry, we have several options for treatment. **As cattle owners we all need to realize that flies are a detriment to cattle performance and also cattle comfort and it is our jobs to do our best to control it.**

**1.** One option that we have is to feed a larvicide or insect growth regulator in our free choice minerals. These products are designed to be fed 30 days prior to the emergence of flies so hopefully you have already started making these available already. Remember, to read and follow label directions for all products.

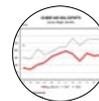
# CLEMSON

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## Upcoming Events

Cattle Handling for Women  
May 19, 2018  
Ridge Spring, SC

Horse Pasture Management  
Field Day  
April 20, 2018  
Clemson Horse Farm  
Clemson, SC

Temple Grandin at SCCA  
Annual Meeting  
April 5-6, 2018  
Clemson, SC

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**2.** Another alternative we have are the old stand-by “fly tags”. These tags need to be in soon and always remember to follow product directions. Some products will call for two tags in a mature animal and one in the calf. If the product calls for two in a mature animal do so. By not doing this you are only killing fewer flies while possibly setting up immunity/resistance in the existing fly population. Fly tags can be found with a pyrethroid or an organophosphate insecticide embedded in the tag. A good practice is to always use gloves in applying these as this product can be absorbed through your skin. As you read the product insert, you may note that some of these products/tags should not be applied until you see approximately 200 flies per animal. It is imperative at the end of the fly season (usually first frost) that the old tags should be removed. If tags are not removed you may possibly set up a resistant fly population and you or your neighbors do not want this.

**3.** Third, we can use “pour-on” as well as dust bags/rubs. The good thing about a “pour-on” is that they can be used at the same time you put the fly tags in. This will give you a fast jump on the fly population and also allow you to use a combination de-wormer “pour-on” to get any internal parasites the animals may have. This is a wise combination for most producers to use. One time through the chute allows for the deworming and placement of the fly tags. Dust bags and rubs are also useful in combination with the tags but must be placed where cattle are forced to walk under them. The rubs or dust-bags offer a good way to especially attack face flies.

**4.** Last are sprays, these products work especially well and are very economical to use.

The downside is that you must be able to get to the cattle easily to apply. A small back pack sprayer is perfect for this process. Cattle with poor dispositions however, may not allow this practice to be done in the pasture but can be accomplished in a corral. For most farms this will need to be repeated every few weeks to keep control of the flies. Remember that you may kill the flies on your place when you spray but flies can travel one to two miles. Therefore, neighboring flies can re-infest the herd within days. The down side to this method is that it is time consuming but can be done when you are riding through the herd when you do your herd checks.

In summary, all of these methods and products on the market are very effective but always follow label dosage directions and application intervals. In addition, it is recommended that most products be rotated every couple of years to make sure you do not develop resistance in the carry over fly population. *A fly free herd is a happy herd!*



# Livestock Market Outlook

*Things are looking up but watch out for a curve ball*

Bernt Nelson, Farm Management Specialist

To start out with, the outlook for ranchers is much better than last year. There is money to be made in livestock. Prices were good in the recent months with resilience even during times when meats were not in peak demand. Seasonally, we normally see cattle prices dip beginning in October, when demand for beef tends to dwindle. This year was a bit different in that prices were resilient during this time. This resilience comes from several sources. First off, when our new president was elected, the stock market began its climb.

The U.S. economy is in pretty good shape. Americans have more money in their pocket than they have for a while. This translated into good demand for high quality beef products throughout the grilling season. Additionally, the global market for beef expanded. China began importing U.S. beef for the first time in 13 years. This made the three Asian countries: China, Japan, and South Korea account for 51 percent of U.S. beef exports. **Good demand both foreign and domestic has kept beef prices holding at profitable levels.**

Live cattle and feeder cattle have begun to drop off with August feeders down today at \$147.30, August live at \$109.95 (03/15/18). The chart for August live cattle can be seen in Figure 2. The

chart for August feeder cattle can be seen in figure 3. Cash prices have seen more stability than futures. Cash prices traded in the range of \$1.27 and kept futures off their low yesterday. Slaughter pace has been good to high with numbers predicted to be at 604,000 this week, up from 597,000 last week. Packers are short bought and showing willingness to pay steady or higher prices to keep additional inventory on hand as long as these margins hold. Choice beef moved down \$0.17 at \$223.73 with Select down \$0.74 at \$216.75 (03/13/18). This spread has narrowed from a record \$30 spread back in June of last year to \$6.98 now.

When that spread was at June levels, the demand for high quality beef was much more substantial. **Now the spread has narrowed and high-quality beef isn't currently valued as highly by the consumer. Packers are making money. The question is, will beef prices need to come down to compete with the high production of pork?**

As of January 1, 2018, the cattle inventory was at 94.4 million head, 0.7% above last year. If one takes a look at the historic flow of the cattle inventory illustrated in Figure 1, it looks like we might be approaching the peak of the current cattle cycle. The cow inventory is approaching levels we have not seen since 2009 sitting at 31.7 million head, 1.6% above last year.

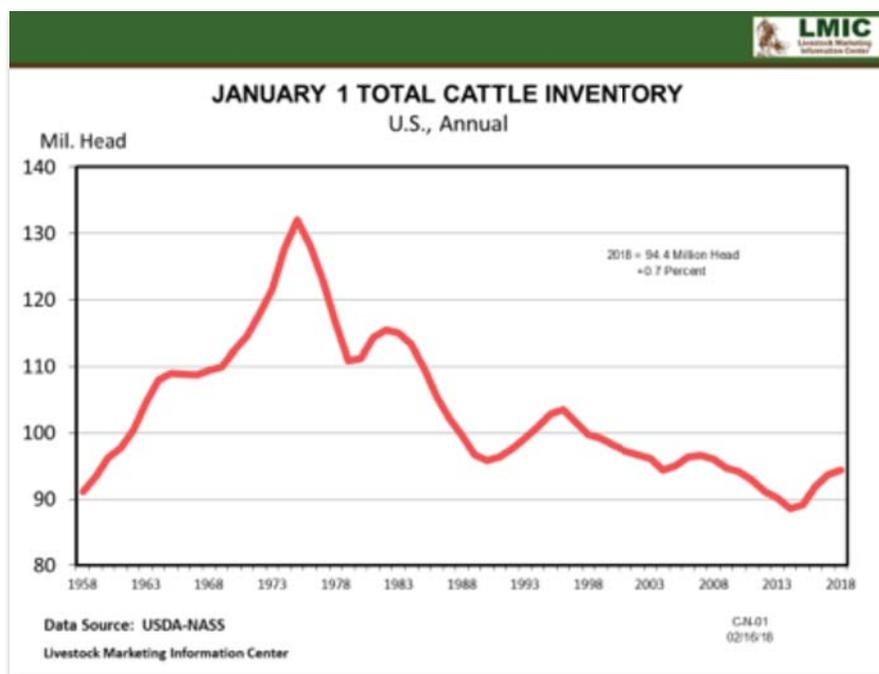


Figure 1. Historic Cattle Inventory on January 1

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Our exports are substantially higher this year than in other recent years. The top importers of beef in order are China, Japan, South Korea, Mexico, and Canada. Trade agreements are extremely important to these trade relationships. Agreements such as NAFTA, TPP, and KORUS (South Korea and U.S.) are key items to be paying attention to when we talk about trade relations with other countries. President Trump announced he wishes to place a 10 percent tariff on aluminum, and a 25 percent tariff on steel. This could threaten the stability of foreign trade relations with some of the big players such as China whom just last year opened its doors to U.S. beef and is now the lead importer of U.S. beef. Trade wars are the current fear. With trade relations such as this, often- times the first target involved is agricultural products. China is a direct trade partner of many products including beef, pork, poultry, corn, soybeans, and others.



Figure 2. August Live Cattle Chart

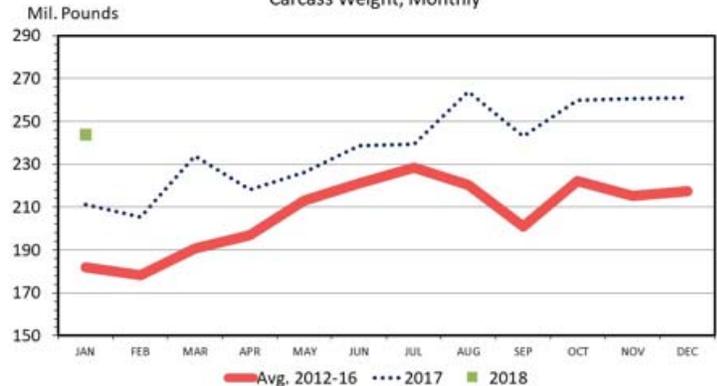
The calf crop for 2017 was 35.8 million animals, 2% above last year. We are looking at very large production for 2018. However, demand for beef both domestic and foreign is looking to keep up with production.

Beef producers need to pay close attention to the events effecting the beef market on a global scale. Take a look at the historic beef exports in Figure 4.



Figure 3. August Feeder Cattle Chart

#### US BEEF AND VEAL EXPORTS Carcass Weight, Monthly



Data Source: USDA-ERS & USDA-FAS  
Livestock Marketing Information Center

Figure 4. Historic U.S. Beef and Veal Exports

Another trade relation of extreme importance to the beef industry is South Korea. South Korea is the third largest importer of U.S. beef. Damaging trade relations with any of our Asian partners does not bode well for anyone involved in the agricultural industry.

To summarize, demand for beef has kept cattle markets strong considering large production. There is money to be made in the livestock industry. However, futures markets are sliding downward, and there are many fragile aspects of this market involving foreign trade that could cause the market to drop should problems arise. Cash has been resilient and holding strong despite the movement in the futures markets.

Packers are making a good margin and are willing to pay to keep the supply chain full. Expect packers to continue this so long as they are seeing a positive margin..

## National Cattle Comfort Index and Maps

**Scott Sell – Coordinator**

*Bull Test Station, Research Herd, and Forages - Edisto REC*

*“Is it too hot to work calves?”*

*“Is the temperature and humidity going to kill these cattle this afternoon if we work them?”*



<https://www.ars.usda.gov/plains-area/clay-center-ne/marc/docs/heat-stress/recognizing-heat-stress/>

Those in the cattle business know those questions and thoughts all too well, especially with most of us having off farm careers and jobs now. Well an informed decision is always the best and thanks to a collaborative effort between the USDA, Oklahoma State University, Kansas State University, the University of Oklahoma, and the weather co-op know as Mesonet, a guide and mapping program readily available on the internet is up and running.

The program was funded by the USDA and essentially produces three base maps:

- 1. Cattle Comfort Index at 100% Solar Radiation**
- 2. Cattle Comfort Index at 60% Solar Radiation**
- 3. Cattle Comfort Index at 20% Solar Radiation**

The maps are created automatically every 60 minutes, and users select a map from the above based on the cloud cover at their particular location within the US. Maps also generated to aid producers include:

- Air Temperature at 1.5 meters
- Wind Speed at 10 meters
- Percent Relative humidity at 1.5 meters
- Solar Radiation at 100, 60, and 20 percent levels

The authors recommend using the 100% solar radiation map for determining maximum stress level in the summer months and the 20% solar radiation map for the winter months. The creators provided the following chart to use as a guide:

Mesonet Cattle Comfort Categories	Cattle Comfort Index °F	Impacts
Heat Danger	>105	Animal deaths may exceed 5%
Heat Caution	>85	Decreased production, 20% or more. Reduced conception, as low as 0%
Comfortable	15 to 85	
Cold Caution	<15 to -20	18-36% increase in dry animal feed
Cold Danger	<-20	

While every situation be it climate, cattle breed, cattle type (dairy or beef), cattle age, and farm/ranch is different this resource is a great guide to follow and use in your management decisions. The monitor can be found at: <http://cattlecomfort.mesonet.us> It includes the maps, historical data and great "How-to" guide.



Photo from: <http://www.ksre.k-state.edu/news/stories/2018/01/great-plains-grazing-webinar.html>

## South Carolina Cattlewomen's Short Course

The South Carolina Cattlewoman's short course is a great program specifically designed for women cattle producers, scheduled for **May 19<sup>th</sup>, 2018 at Yon Family Farms** in Ridge Spring, South Carolina. The class is designed to bring women producers together from across the state to help build a network of women that are currently or would like to become involved in the cattle industry. The program will focus on promoting safety for women livestock owners while performing different tasks on the farm.

There will be hands-on demonstrations, such as truck and trailer safety and driving, tractor and implementation operation, and cattle handling. Participants will also receive their Beef Quality Assurance (BQA) certification along with a year's paid membership to the South Carolina Cattleman's Association.

Registration for the class can be found on line at: [https://secure.touchnet.net/C20569\\_ustores/web/classic/store\\_cat.jsp?STOREID=124&CATID=427](https://secure.touchnet.net/C20569_ustores/web/classic/store_cat.jsp?STOREID=124&CATID=427) and the cost is \$40 for the day. Lunch will be provided along with class material. If you have any questions or are interested in signing up for the class please contact Lindsey Craig at 864-878-1394. Our team looks forward to meeting women producers from all across the state of South Carolina.



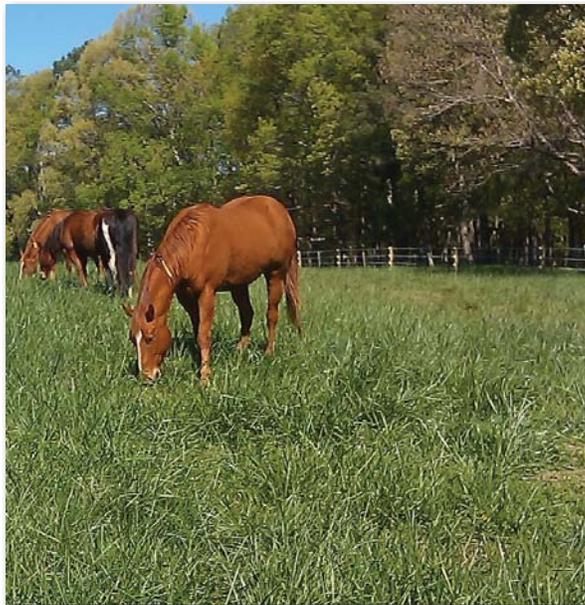
# Preventing Laminitis in Grazing Equines

Cassie Wycoff, Clemson Extension Area Livestock Agent

Warmer spring temperatures are finally here, and horse owners everywhere are rejoicing as more time can be spent outside and in the saddle. As our forages began to grow and our horses spend more of their day in the pasture, it may also mean less hay feeding and fewer stalls to clean (which is something to be excited about all in itself). With all this excitement, also comes a cause for concern. Although horses evolved as grazing animals, well-adapted to consuming and digesting forages; the lower quality native grasslands they were designed to consume are much different than the high-quality pasture forages we have today.

***Many of today's improved pasture grasses and management techniques put our grazing equines at risk for developing laminitis- a debilitating systemic disease that manifests itself in the horse's feet, causing significant pain and lameness.***

Horses need a predominately forage diet to maintain a healthy digestive system, so why is it that these grasses can also do so much harm? First, we need to understand the carbohydrate fractions that the grass is made up of. We can classify these carbohydrates into two main categories: structural and non-structural. Structural carbohydrates do exactly what their name suggests- give the plant it's rigidity. These carbohydrates are more



fibrous and take longer to digest, requiring the help of special microbes that live in the hindgut of the horse. Non-structural carbohydrates (or "NSCs") include simple sugars, fructans and starch. Under normal conditions, these carbohydrates would be easily broken down in the stomach and small intestine, rarely reaching the powerful microbial fermenters in the hindgut. However, when these soluble sugars are consumed in excess amounts, they exceed the capacity of the small intestine and spill over into the hindgut- supplying rapid fuel to the microbes. This results in the over production of gas and lactic acid, causing the digestive system to become very acidic and inflamed, and subsequently leading to a laminitis episode. At certain times of the year, our pastures can be as big of a laminitis or colic threat to our at-risk equines as an open door to the feed room.

## Who's at risk?

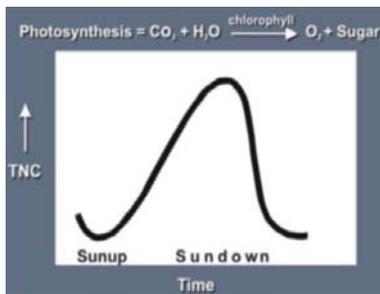
Horses with a pre-existing metabolic condition are at a higher risk for developing laminitis because their ability to metabolize carbohydrates is compromised. Equines diagnosed with Equine Metabolic Syndrome are typically obese, with increased body condition scores (BCS) and increased adiposity along the neck and tail head. There is a genetic pre-disposition as well, so certain breeds are more at-risk than others. Overweight equines carry a higher possibility for developing a number of metabolic diseases, including Cushing's, laminitis, and insulin resistance. The goal for these overweight animals is to almost always reduce dietary calories while increasing physical activity. Unfortunately, for many horses with limited forced exercise activities, pasture turn-out is the only available exercise.

## Is Your Pasture Safe?

The non-structural carbohydrate fructan is the storage carbohydrate of cool season pastures, such as tall fescue; whereas our warm season varieties (bermuda and bahia) utilize starch. Cool season pastures have a greater propensity to accumulate large amounts of NSCs, and therefore cause harm, than do our warm season grasses.

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Most equine managers understand the associated risk of laminitis is highest during spring and fall, when these cool season plants have the most growth; however, there is also a daily fluctuation in the amount of NSCs the plant acquires. During daylight hours, the plant is able to carry out photosynthesis and produce soluble sugars, which accumulate in the plant. These sugars rise throughout the daylight hours, peak in late afternoon and fall to lows by early the next morning as the plant consumes its sugar reserves. Other environmental conditions (such as shade or cool weather) can affect sugar accumulation in the plant as well.



Often times, attempts are made to reduce the calories a horse consumes at pasture by restricting their turn-out time; however, research has determined that horses are very adept at speeding up consumption rates. Let's say an owner was to turn an exceptionally "piggy" horse out to pasture for only a few hours each afternoon. The horse could potentially learn to consume that forage (which is much higher in soluble sugars) much faster, placing it at an even higher risk for the NSC overflow scenario that was described earlier.

## What can you do?

There are several management strategies that you can implement to

minimize NSC intake that may be useful in preventing pasture associated metabolic conditions.

The first involves the use of a grazing muzzle. **Grazing muzzles can reduce forage consumption by as much as 80%**, allowing horses the much-needed exercise they receive during turn-out, while also reducing their dietary calories. Always be sure the muzzle is properly fitted to your horse and that they can drink when wearing it.

Proper pasture management is also a vital tool to managing NSC consumption. **Pasture rotation and maintaining a proper grazing height are not only healthier for your pasture, but healthier for your horse as well.** This is because the storage carbohydrate, fructan, is stored in the lower stem of the plant. Overgrazing exposes the stem, and therefore the fructan. Since plants produce more structural/non-digestible carbohydrates as they grow taller, more mature grasses are lower in soluble sugars and calories. To take advantage of this, a pasture must be left until it has reached 6-8 inches before it can be grazed, and horses must be removed when it reaches a height of 3-4 inches. These rotation systems should also include a dry lot, which can be utilized during times when pasture growth is restricted or to restrict calories by feeding hay.



Slow feed hay nets can be utilized in

the dry lot to feed hays lower in energy density. The hay net slows consumption rates and minimizes spikes in blood insulin levels that may otherwise occur after a big meal. This also keeps them feeling full, so they're not ravenous when they finally do get to go out. **For horses that are at risk, restricting grazing hours to the early morning is best to reduce NSC consumption;** and when introducing them to pasture for the first time, start with 15 minutes and increase by 15 minutes each day until 4 or 5 hours is reached. At that point, they can be left out for the desired amount of time. If you suspect your equine has any of the aforementioned metabolic disorders, contact your veterinarian to assist you with a health management plan. For assistance with pasture management, forage testing and other management decisions, contact your local Clemson Extension agent.

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