When the weather starts cooling, it doesn’t only mean that football season is around the corner, it also means that a large percentage of cattle farms in this region are beginning one of the most intense and busy seasons: calving time. Fall calving allows for many different options when marketing, but that’s a different topic for a different article. Here we’re going to look at management and some issues to watch for.

**Pasture**

Make sure you have a pasture ready for calving. Hopefully this pasture is clean with plenty of good forage available. We need to take care of the cows and their calves need to have a good place to begin their lives. We typically designate a “clean” pasture as a pasture that hasn’t been grazed in 6-12 months. However, many farms cannot accommodate that. If we can get anywhere from 2-4 months, our pastures are “clean-er” and we can hopefully look to improve the chances of disease and heavy parasite (worm) loads on our animals.

**Body Condition Scoring**

This is a very important concern when we start looking forward to calving season. As a general rule of thumb, we prefer to see heifers in a BCS of 6-6.5 at calving time, and cows in a BCS of 5-5.5. We need to start looking at our animals at least 30-60 days prior to calving to allow for bringing them to the appropriate level if they are lacking.

**Calving Difficulty**

Know the proper presentation for a calf. Make sure you have a calving “toolbox” prepared. A toolbox should include OB chains and handles, lubricant, calf jack (optional), gloves/palpation sleeves, and a flashlight with new batteries. If you are having problems, it may be a good idea to give your regular veterinarian a call so they will be prepared to come assist you. If you haven’t had any progress within 30 minutes it is advisable to get your veterinarian to come out.

**Health Concerns**

Here is a list of some issues generally seen during the fall and winter seasons:

- Hypocalcemia (milk fever)
  Cow will not be able to stand, if she does, she will stagger and soon fall. Advanced stages will have them down and their head and neck will be facing their back end.
- Hypomagnesemia (grass tetany)
  Cow will stagger; advanced stages will have the cow down and displaying convulsions. This is usually put under “spring season” illnesses, but is also prevalent in the fall season because of increased grass growth.

(Continued on page 2)
In light of the recent tornado, wildfire, and hurricane in our great state, the topic of disaster preparedness seems to be a front-runner on everyone’s mind. Obviously the safety of you and your family are of greatest concern, but it is also important to consider your livestock and develop a plan in case of an emergency. The following are general tips to include when formulating a disaster plan for your farm:

- **Keep extra hay, feed, water, medications, and medical supplies on hand**
- **Compile a folder with important records, registration papers, medical history, medical needs, specific dietary restrictions, and photographs of your livestock. This documentation will be important to find and claim your animals if they escape.**
- **Make sure every animal has individual identification. Luggage tags can be braided into horse’s mane with pertinent information, phone numbers can be written directly on the animal with a livestock crayon, or consider having your horse microchipped.**
- **Secure or remove items that could become hazardous debris. Filling large items, such as empty feed troughs, prevents them from blowing around and will provide an additional supply of water.**
- **Create a disaster box and keep it in your barn or trailer for emergency purposes. This box could contain tack, ropes, halters, feed, medicines, paperwork, buckets, feed nets, garden hose, flashlight, blankets, tarps, portable radio, and spare batteries.**

If evacuation is mandatory or if you feel that evacuation is the safest option for your family, you will need to create a plan for safely traveling and temporarily housing your animals. Here are a few quick tips from the North Carolina Department of Agriculture in regards to evacuation planning:

- **Evacuate animals as soon as possible. Be ready to leave once the evacuation is ordered. In a slowly evolving disaster, such as a hurricane, leave no later than 72 hours before anticipated landfall, especially if you will be hauling a high profile trailer.**
- **Arrange for a place to shelter your animals. Potential facilities include fairgrounds, other farms, racetracks, humane societies, convention centers, and any other safe and appropriate facilities you can find.**
- **Contact your local emergency management authority and become familiar with at least two possible evacuation routes well in advance.**
- **Set up safe transportation and experienced handlers and drivers.**
- **Take all your disaster supplies with you or make sure they will be available at your evacuation site.**
- **If your animals are sheltered off your property, make sure they remain in the groupings they are used to.**

If you choose to stay home through a disaster or if one suddenly hits, you will need to decide whether to leave animals in the pasture or confine them in a shelter. This decision should be based on available facilities, the type of disaster approaching, and the consideration of the animals’ ability to protect themselves. Before an emergency, evaluate your pasture and facilities for the best location. If you have trees that may be easily uprooted, overhead power lines, miscellaneous debris, barbed wire fencing, and extremely small acreage, your pasture might not be the safest place to leave your livestock.

After a disaster it is critical to remember that the behavioral state of your livestock has probably been altered. These animals may be greatly agitated and confused and it is best to handle your animals in a cool, calm, and collected manner. Place your livestock in a familiar setting with other animals they are familiar with to reduce the amount of stress. If you have evacuated the area and are returning home after a catastrophic event, remember that there can be hazards on the road such as downed power lines, flooded areas, debris and wreckage that may make it difficult to travel through especially hauling a trailer with livestock.

Disaster preparedness is the key to reducing chaos and stress when an emergency strikes. Consider creating a plan for your family and your farm before the threat of a storm or natural disaster is ever present. In the long run, it pays to be prepared.
Livestock Budgeting and Marketing
By: Seth Holt, Extension Agent with NC Cooperative Extension in Lee County

I remember vividly participating in Dr. Arnold Oltmans’ Agriculture Economics class at N.C. State while working on my Bachelors degree. Dr. Oltmans had a very unique style of lecturing and engaging students into the multifaceted world of agricultural economics. Specifically, I can remember us students having to set up and manage a livestock budget for a beef cattle herd according to average input costs in the state of North Carolina. I was very shocked to find that the only numbers that turned a profit in beef cattle production ran between 500-700 head of cattle, and those numbers only showed a plus side if the pasture they were grazing was owned or inherited land. It was later on as a livestock agent, and extending my educational training through livestock economics under the direction of Dr. Geoff Benson that I learned that there are two common mistakes we make as livestock producers when we “budget” our operations: we neglect a large percentage of our input costs, and we often turn a blind eye to marketing our products so that we can return a profit on our ventures.

Having returned to my home county as an agriculture agent, and returning to my family farm, which consists of produce and a small beef cattle herd, I have learned that putting the pencil to the paper on a livestock enterprise can really hurt your financial feelings. Having said that, I have also learned that there are inputs that are worthwhile for investing, and actual practices that if eliminated from or added to an operation could generate more income. For any livestock enterprise, whether you are raising cattle, horses, goats, sheep, swine, or pasture raised poultry the very first thing you must determine are your goals and objectives. For example, the single goal for most of the cattle producers in the piedmont area is to graze animals to an average weight between 400-800 lbs and then sell the animal at the local stockyards. If we use this one common example, we can break down any cattle/livestock enterprise into a budget that shows a positive or negative return on investments.

Using the scenario of two separate cattle operations, one operation with 25 mother cows and the other operation consisting of 150 mother cows we can create a budget that is divided into 3 separate categories: grazing costs, hay and supplemental feeding costs, and facility cost. Grazing inputs include a multitude of inputs such as forage seed, fertilizer, lime, herbicide, minerals, fencing, land rent and water supply. Hay and supplemental feeding should include hay, grain, other feedstuffs, hay storage, and grain storage. Working pens, chutes, corrals, etc. combine together to total your facility costs. Tractors, hay making equipment, sprayers, and other implements used into your livestock operation should be divided into both grazing and hay costs according what percentage you use the equipment to support either category of the operation. So back to using the scenario of a 25 cow vs. a 150 cow operation, for basic starters lets look at the table below to determine our cost of grazing vs. our cost of feeding hay.

### Grazing Forage Requirement

| 1,150 lb animal x 2.5%BW = | 1,150 lb animal x 2.5%BW = |
| 28.75 lbs/day x 25 head = | 28.75 lbs/day x 150 head = |
| 718.75 lbs/day | 4,312.50 lbs/day |
| 1 acre yields 2 tons of forage on avg. (4,000 lbs) | 1 acre yields 2 tons of forage on avg. (4,000 lbs) |
| 4,000 lbs | 4,000 lbs |
| 718.75 lbs/day | 4,312.50 lbs/day |
| = 5.5 days of grazing on 1 acre for 25 cows | = .9 days of grazing on 1 acre for 150 cows |

*BW = Body Weight

### *INITIAL* GRAZING INPUT COST (to graze 265 days/year)

| Forage Seed for 48 acres (25 cows) = $480 (at $10/a) | Fencing for 48 acres = $3,733 | Lime, Fertilizer, and Herbicide for 48 acres = $3,264 (at $68/a) | Minerals and Water for 48 acres = $240 | Initial Total Cost for grazing 48 acres = $7,717 |
| Forage Seed for 295 acres (150 cows) = $2,950 (at $10/a) | Fencing for 295 acres = $22,946 | Lime, Fertilizer, and Herbicide for 295 acres = $20,060 (at $68/a) | Minerals and Water for 295 acres = $1,140 | Initial Total Cost for grazing 295 acres = $47,096 |

*For animals weighing 1,150 lbs

Notice with the grazing budget, that we penciled out initial cost. Costs for grazing should decrease by half every year after the pasture is established or first grazed. There will be required inputs later for things such as fence repair, spraying weeds, and liming. However, certain things like liming, spraying for weeds, fertilizing, re-seeding, etc. should not be done every year or every other year. We are fortunate in a grazing system to have long lasting, very effective herbicides, that if one timely application is made once every 2-3 years, you should have very good weed control.
With feeding hay, there are certain practices that can eliminate a 30% loss in your hay rolls. By storing hay bales under a shelter, and rolling your hay bales out for animals to eat, you can reduce your % loss to under 5%, which is a 25% gain on hay utilization.

Part of the take home message for budgeting your livestock operation is that it is much cheaper to graze than to feed hay. Even if you are making your own hay to feed, then you should pencil out how much it is costing you just to make one roll. If you take fuel cost alone for making hay then you can figure on average 4 gallons of diesel fuel per acre, and with diesel at $3.95/gallon, you’re spending $15.80/acre to make hay. Then add in your other inputs such as equipment (tractors, mowers, rakes, balers), string, and labor and you will soon find out that the man selling you a 1,200 lb. roll of hay at $35.00 per roll is not making any money off of you buying his hay.

The other part of my budgeting message is to be positive that you are getting the most bang for your buck. For instance, take the 25 cow operation: each cow weans a calf at 550 lbs. You sell 25 calves weighing 550 lbs at the stockyards bringing a price of $1.35/lb leaving you with a gross profit of $18,562.50. Subtract your hay and your initial grazing cost and your left with $7,828.30. Once you figure in equipment and facility input costs into the equation then you may be left with little to no net profit. However, if you choose to market your animals through a niche market such as selling beef directly off the farm then you can increase your price from $1.35/lb to $1.75/lb, turning your gross profit from $18,562.50 to $24,062.50. I fully understand that not all livestock operations are in the same boat, and different management practices and inputs work better for some operations whereas they work against other operations. At the end of the day, we livestock producers have to ask ourselves “is this what I want, and if so, is it working for me?” Once again making a profit off of livestock goes back to your goals and objectives. I have never known a producer to make money off his animals if his attitude about raising livestock was “I enjoy having the animals around.” It is very easy to loose money in our industry, however there are golden opportunities to make a good living as well.

### HAY FEEDING COSTS (to feed hay 100 days/year)

<table>
<thead>
<tr>
<th>Herd of 25</th>
<th>1,150 lbs x 2.5% BW = 28.75 lbs/day</th>
<th>28.75 lbs/day x 1,200 lb. roll x 30% loss = 840 lbs of hay to eat</th>
<th>840 lbs of hay 718.75 lbs/day = 1.16 days of eating roll</th>
<th>100 days/year 1.16 days/roll = 86.2 rolls needed for 100 days</th>
<th>86.2 rolls x $35.00/roll = $3,017.2 per year on hay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows Avg.</td>
<td>Weight is 1,150 lbs</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Herd of 150</th>
<th>1,150 lbs x 2.5% BW = 28.75 lbs/day</th>
<th>28.75 lbs/day x 1,200 lb. roll x 30% loss = 840 lbs of hay to eat</th>
<th>840 lbs of hay 4,312 lbs/day = .19 days of eating roll</th>
<th>100 days/year .19 days/roll = 526.3 rolls needed for 100 days</th>
<th>526.3 rolls x $35.00/roll = $18,420.50 per year on hay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows Avg.</td>
<td>Weight is 1,150 lbs</td>
<td></td>
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</tbody>
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**Forage Management Tips**

* **SEPTEMBER**
  * Fertilize and lime cool-season grasses.
  * Keep pressure on summer grasses and completely use them before grazing cool-season forages.
  * Watch for fall insects (armyworms, grasshoppers, crickets).
  * Overseed or no-till winter annuals into summer perennial grass.

* **OCTOBER**
  * Finish using summer grasses before grazing the cool-season ones.
  * Watch for prussic acid poisoning when grazing sudan and sorghum-sudans after the first frost.
  * Overseed warm-season grasses with winter annuals.

* **NOVEMBER**
  * Do not graze fall-planted perennial pastures until growth reaches 6 to 8 inches.
  * Separate lactating and dry cows and give the lactating cows the best quality pastures and hay.
  * Winter annual pastures planted in September may be responsive to a nitrogen application (30 - 50 lbs/acre).
  * Test forages before winter feeding begins.
What Horse Owners Should Know About Feed Supplements

By: Elena Eller, Extension Agent with NC Cooperative Extension in Moore County

In the 1980’s the medical community adopted the term “nutraceutical” to define a substance that was orally administered and had the characteristics of both a nutrient and a pharmaceutical. Although this was initially a very small list of products, the nutraceutical market has rapidly grown into a multi-billion dollar industry, a portion of which is focused on animal health. The inclusion of nutraceuticals and feed supplements into nutritional programs for horses and into veterinary clinical practice has been controversial, as veterinarians and horse owners alike struggle with questions of safety and efficacy. Nevertheless, it is clear that the inclusion of these substances is becoming increasingly important in the treatment of equine illnesses, as both complementary and alternative treatments to traditional drug therapies.

Importantly, there are no laws or regulations which specifically define a nutraceutical. However, definitions given by the Federal Food, Drug and Cosmetic Act (FDCA) identify what a nutraceutical is not: a drug, a food, or a food additive (examples of food additives include preservatives and pelleting agents). Because of this, they are not regulated by the FDA per se, but the Center for Veterinary Medicine for the FDA prohibits veterinary nutraceuticals (as well as substances we commonly call feed supplements) from making expressed or implied claims to the treatment or prevention of disease without being classified as an unapproved drug. In spite of this, there are many products in feed stores and on the internet (and likely many in your feed room) intended for animal use that claim, or at least imply, to prevent or treat health problems. So what is really the difference between a drug and a nutraceutical? Nutraceuticals and feed supplements do not fall under the category of drugs simply because they have not undergone the lengthy and costly approval process required by the FDA to prove both the safety and the efficacy of their intended use. Thus it is very important to be aware and make informed decisions.

There are benefits for nutraceutical manufacturers (and possibly for the consumer as well) to be gained by avoiding having products classified as a drug. Less pre-market testing means less cost incurred by the manufacturer and consequently less cost passed down to the consumer, it also means less time before the product is available on the market. The down side is that this lack of regulation has led to problems with product quality, safety, and efficacy. Further compounding the issue, these products are available over-the-counter, and are often used without professional supervision. The old adage “above all else, do no harm” should be of utmost importance when considering the use of these products. Consumers often assume nutraceuticals are safe based on packaging and labeling, which often resembles that of approved drugs. Assumptions of safety also stem from the product being labeled “natural” or something naturally occurring in the body. Unfortunately, being natural is completely unrelated to product safety. There are many supplements on the market that contain herbs and plant derived ingredients. It is important to remember that plants contain chemicals, such as certain alkaloids, that may be toxic to horses, even if they are safe for other species. Additionally, some nutrients that are perfectly safe when supplied at appropriate levels in the diet, can cause severe nutrient imbalances and toxicity if given in large doses.

Without regulations controlling the sale and manufacture of nutraceuticals, quality (purity, stability and consistency) of the product also comes into question. Lack of good manufacturing practices has lead to products in which the actual contents fail to match the label. For example, several research studies of common joint supplements have reported consistent mislabeling in which the active ingredients contained in the product range from 0% to over 150% of what the label claims.

There are measures that can be taken to select the best source for a particular product. First, the label on the product should contain a list of ingredients (using common names), the intended use of the product, and detailed instructions for administration. In addition, the manufacturer should be willing to provide information regarding manufacturing procedures, whether or not they participate in programs that offer verification of quality assurance, and if the product has undergone safety testing. Absence of information from the product label or reluctance on the part of the manufacturer to share any and all aspects of their manufacturing process should discourage you from using a particular product. A few states actually require specific safety studies be conducted and may also have more stringent label laws for products accepted for sale and distribution in the local feed stores. If products are certified as Generally Recognized as Safe or “GRAS” in states such as Texas, the product has at least undergone safety testing by an independent laboratory. If you have questions about incorporating a product into your horse’s nutritional program, contact an equine nutritionist, your local extension agent, or a veterinarian.
UPCOMING EVENTS

Scarlett Mobile/C-Cross Farms
AI Short Course
October 8-9
Contact Adam Ross at 336-318-6000
or
Dr. Brent Scarlett at 336-629-5400

Herd Health for Central North Carolina Cattle Farms
Speaker: Dr. Brent Scarlett
Moore County Ag Center
October 6th, 6:30 p.m.
Contact Elena Eller at 910-947-3188

Livestock Field Day
At Harper’s Crossroads
November 5th, 10a.m.–2p.m.
Contact Adam Ross at 336-318-6000
Or
Elena Eller at 910-947-3188

Feed Stuff Nutrition for Livestock
Speaker: Dr. Gerald Huntington
Lee County Extension Center
November 8th, 6:30 p.m.
Contact Seth Holt at 910-775-5624

NC Beef Cattle Improvement Program Bull Sales
Butner Sale: December 16, 2011
Waynesville Sale: January 7, 2012
Contact Adam Ross at 336-318-6000

NC Forage & Grasslands Council Winter Conference
Guilford County Extension Center
January 25th, 2012
1 - 6 p.m.
Registration Information Coming Soon

Beef Management for Accelerated Production and Profits
Class Starting January 17
Contact Adam Ross at 336-318-6000
or
Elena Eller at 910-947-3188

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