INTRODUCTION

Hello! I wanted to take this opportunity to introduce myself. I have met several folks already, and I want to say I appreciate all of the welcoming remarks you have given me. My name is Jeff Bradley, and I am from Rutherford County where my family operates a small beef cattle farm. I have a wife, Jennifer, and two children. My daughter, Kylie, is four; and my son, Jackson, is two. I have six years of previous experience with NC Cooperative Extension in Polk County where I served as a Livestock, Forage Crops, Field Crops, and Pesticide Agent. I spent a brief time teaching high school agriculture and embraced the opportunity to come back to Extension work.

I will be serving as an area agent for three counties. My time will be spent in Buncombe County three days a week, and the other two days will be divided between Henderson and Transylvania counties. Feel free to give me a call or drop by our office with your questions or just to say hello. I look forward to working with each of you.

HAY FIELD DAY

The annual Hay Field Day will be held on Thursday, July 19, at the Mountain Research Station near Waynesville, NC. Educational stops planned for this event include:

- Demonstrations of the effects of split fertilizer application and timing of application on forage yield.
- Effects of storage on hay quality and reading a forage analysis, weed identification and pesticide safety.
- Hay equipment from several manufacturers will be on hand to display and demonstrate equipment for cutting, tedding, raking, and baling hay.
- Distributors of hay storage systems and hay feeding equipment, animal health products, and chemical sprayers will be on hand.
- Pesticide credits will be available at this field day.
DROUGHT MANAGEMENT

North Carolina suffers from frequent periods of drought, even though we have frequent rain showers they are often of short duration and high intensity resulting in little moisture infiltration into the soil. These periods result in reduced forage growth and limited forage availability. There are several management practices that can reduce the effect that drought has on livestock production.

- **The first thing we need to consider in drought conditions is the forage type we are growing.** In the mountains of western North Carolina we primarily have cool season grasses such as tall fescue and orchardgrass. These grasses do not grow well in hot dry weather; they will go into a dormancy period where they are not actively growing. During this time we need to protect the forage base as much as we can.

- **Do not allow it to be grazed under 3 inches.** By leaving this much leaf area on the plant it will be able to take advantage of any moisture we get and begin to grow. Allowing some leaf area to remain will give the plant a head start as it needs this area for photosynthesis which provides it with the energy to grow. When we leave a three inch canopy of forage we also shade the soil from sunlight. This will help prevent the evaporation of moisture from the soil, protecting this valuable nutrient in times of drought. If these grasses are over grazed we face lower yields in the fall and a possibility of a reduction in the stand of forage. This is because cool season grasses are slower to recover from drought conditions than warm season grasses such as bermudagrass.

- **Using a managed grazing system** where cattle are rotated through a number of pastures will help during drought conditions. This is because we are giving the plants a chance to rest and grow and we are leaving an adequate canopy to shade the soil surface. If we are rotating our cattle we are forced to look at them and the pastures on a regular basis helping to prevent us from over grazing.

- **If at all possible a sacrifice area should be used** to pasture and feed the cattle if the drought is lengthy. This will allow the other pastures to be rested and prevent them from being over grazed. When livestock are moved to this area provide plenty of hay to help get them through this trying time.

- **Begin creep feeding your calves.** It is more profitable during these times than during years with plenty of moisture. When there is quite a bit of forage available but it is of low quality start by feeding a pound a day of an oilseed meal such as cottonseed or soybean meal to boost the amount of protein available to the growing calves. Once they are eating a pound a day we need to add 5 to 10% salt to limit their intake. When forage availability is low we need to feed more to the calves, during this time feeding byproducts such as soybean hulls, corn gluten or wheat midds is a good practice.

- **Early weaning may also pay off.** In this practice calves are weaned after six months of age. This will allow you to feed them higher quality forages and feeds without feeding it to the cows. The cows can be maintained on a lower quality diet at this time if they are not nursing. Cows in spring calving herds will breed back easier after the calves are weaned and will maintain their body condition more easily.

- **Culling** is another practice we need to make use of during drought conditions. Cows that did not produce a live calf need to be culled. They are not paying for their upkeep. Many times we justify keeping these cows due to their past production or their pedigree, but the fact is they are costing you money. During drought conditions open cows and those over 10 years old should be culled. This will free up forage resources for the bred cows and replacement heifers. When forage resources are scarce we need to make sure to palpate the cows to determine if they are bred and cull those that are open.

During drought years we find out if our stocking rates are too high. We are often surprised at how fast the forage runs out during these years indicating that we are over stocked. If we have a brief dry spell and run out of grass, the pasture is over stocked and we need to cull the herd down to a moderate stocking rate. If lower quality forages dominate the pasture after the drought breaks, we are under stocked and need to think about saving a few more heifers to help build the herd. In an extended drought, no matter what we do, we will run out of grass and need to manage accordingly.
Grazing Management Tips:
• Rotational grazing can help keep pastures growing longer during drought conditions.
  o Allows the plant to rest.
  o Forces cattle to graze less palatable species before rotating.
• Graze cool season grasses to 2 to 4 inches.
  o Leave some leaf area for regrowth
• Consider using a sacrifice pasture.
  o Allow one pasture to be overgrazed.
  o Ideally this should be a pasture that is due for renovation.
  o Allows other pastures to have adequate leaf area for growth once the drought breaks.

PRODUCING HIGH QUALITY HAY

Hay is an integral part of most beef production systems in the southeast. Producers can either produce their own hay or purchase it from a hay producer. It is vital for livestock producers to understand the processes of growing, harvesting and storing hay if they are producing their own hay or purchasing their hay. These processes influence the nutritive value of the hay which can alter livestock performance. By understanding the changes that can take place during hay production the nutritional program can be altered to maintain livestock performance.

• Prior to the hay season and before each harvest all hay equipment should be thoroughly examined and serviced. All equipment should be greased, gear oil levels should be checked and filled, wheel bearings should be serviced, tires should be checked and inflated. Mower sections and blades need to be sharpened or replaced prior to the start of the haying season and should be checked before each mowing. Failure to insure that the haying equipment is in good working condition can delay harvest. This delay in harvest results in an inestimable amount of damaged hay on a yearly basis.

• Hay should be harvested at the point when quantity and quality are both optimized. Factors such as weather, equipment failures, off-farm employment and other obligations can lead to delaying the harvest of hay. Forage quality typically decreases with increasing maturity. As forages mature, the leaf to stem ratio decreases. Higher proportions of stem result in higher concentrations of fiber and lower concentrations of crude protein and digestible dry matter. The management of forages crops is not just limited to producing a single high quality crop. Most forages that are utilized for hay need time for adequate regrowth to maintain the stand. Cool-season grasses such as tall fescue and orchardgrass should be harvested at the boot or early heading stages of growth for the first cutting and then at 45-60 day intervals thereafter. These harvest times should provide the best compromise between nutritive value and yield whenever possible.

Storage of hay at the edge of the hay field on the ground leads to greater deterioration of the hay. Approximately 50 percent of the storage losses can be attributed to the soil/hay interface when hay is stored outside and on the ground. Dry hay acts like a wick drawing moisture out of the soil and into the hay bale. Air movement may not be as great around the bottom of the bale as it is around the top. This can be affected by the shape, and density of the bale and the storage site. Improper storage can lead to moist conditions within the bottom of the bale that promote microbial activity.

Numerous methods have been used to elevate hay stored in the open. These include using telephone poles, pallets, railroad ties and pipe to raise the hay off of the ground. These bases should allow for some air movement under the bales and also prevent the hay from sitting in standing water. The storage site for hay stored outside should be in a sunny, breezy, well-drained area. This location should be near the top of a slope if possible and have a southern exposure. Rows should be oriented so they run up and down the slope, as rows running across the slope will trap runoff after a rainfall event. Bales should be butted up against each other within a row while adjacent rows should not touch, with a gap of at least three feet between rows.
## LIVESTOCK NEWS

**SUMMER MANAGEMENT CALENDAR**

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<th>May General</th>
<th>Spring Calving</th>
<th>Fall Calving</th>
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| - Control pasture weeds by clipping or with chemical weed control.  
- Check out the hay equipment and make sure it is ready for operation.  
- Control flies.  
- **Cut hay!** | - Vaccinate calves more than 3 months old with clostridial vaccines (black-leg).  
- Castrate and dehorn any calves missed at birth.  
- Implant calves. Calves that were implanted at birth may be reimplemented.  
- Check on condition of bulls during breeding season. Provide supplemental feed if needed.  
- Spot check to make sure cows are settling. | - Pregnancy check cows 45-60 days after the end of the breeding season. Sell open cows.  
- Check cows’ eyes, udders, feet, legs and production records for others that should be culled.  
- To precondition calves for shipment, vaccinate for respiratory diseases (IBR, PI3, BVD, BRSV, H. Somnus) 45 days before weaning. |

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<th>June General</th>
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| - Put hay in barn or move round bales to dry, well-drained areas and cover them.  
- Clip overgrown pastures.  
- Continue fly control  
- Check mineral and water supply often. | - Spot check cows to see if most are bred. By now, there should be little activity.  
- Remove bulls on June 20 for January-February-March calving.  
- Put bulls in a small pasture with strong fences. Young bulls in thin condition may need a little supplemental feed.  
- Vaccinate for clostridial diseases, castrate and dehorn late calves or those missed in earlier working. | - Check and repair fences in pens where weaned calves will be placed.  
- Wean calves depending on pasture conditions and marketing plans.  
- Select replacement heifers based on weaning weights.  
- Deworm calves at weaning.  
- Cull open and poor producing cows after weaning. |

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<th>July General</th>
<th>Spring Calving</th>
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| - Continue fly control. Watch fly numbers; as tags get old, you may need to begin spraying or using back rubs.  
- Check for pinkeye, cancer eye and foot rot.  
- Check water and minerals often. Plenty of clear water is critical in summer. At 90 degrees F, a mature cow nursing a calf drinks about 17 gallons of water a day. | - Consider creep feeding, depending on pasture conditions and marketing plans.  
- Pregnancy check cows 45-60 days after the end of the breeding season.  
- Pregnancy check heifers 45-60 days after the end of the breeding season.  
- Sell open heifers now.  
- Brand or otherwise establish permanent IDs for bred heifers. | - Wean calves depending on pasture conditions and marketing plans.  
- Wean replacement heifers and separate from the rest of the herd. Weigh heifers to project needed gain between now and breeding.  
- Deworm calves at weaning & cows if needed. |
BEEF HERD RECORDS:
WHAT SHOULD YOU KNOW ABOUT YOUR HERD?

- Are your cows individually identified (with ear tags and tattoos)?
- Are calves tattooed and ear tagged at birth?
- Do you carry a pocket record book to note breeding dates, calving dates, sex of calf, difficult births, or degree of assistance required at birth?
- Do you make notes on the season (unusually dry, cool, etc.,), forage quality and availability, winter feed quality and availability, and relate these to average weaning weights?
- Do you individually weigh your calves at weaning?
- Do you annually or semi-annually weigh your cows to determine the percentage of her weight she weans in calf each year? This may be the best overall measurement of efficiency we have readily available.
- Do you record all purchased feed, medication, fertilizer, lime, hired machinery, and hired labor expenses and total annually?
- Do you make note of all sales commissions and transportation expenses and total annually?
- Do you know your initial cost and year of purchase of any fencing, handling facilities, specialized equipment or buildings used in conjunction with your beef operation?
- Do you note the purchase price, year of purchase and expected life of any breeding animals you purchase or have on your operation?
- Do you keep records of your land rental rates and property taxes, and have some idea of the current value of your property?

If you have answered yes to all or most of these questions, you should be able to get reasonably accurate estimates of your annual cow maintenance cost, and be able to make sound marketing decisions concerning your cattle. Without these records, your marketing decisions are simply your best guess at the time.

Organization is the key to keeping accurate records. Make sure you or your employees obtain receipts for all purchases related to your farm. Designate a location where those receipts are placed and retrieve them weekly or monthly to enter in your ledger or records program. Numerous software programs are available to maintain such records if you have a personal computer. Carry your pocket calendar daily to make entries as described above and summarize those notes at the same weekly or monthly intervals. Obtain access to accurate scales for weighing calves and cows. Many scale options are now available including digital load cell models which are much more versatile than conventional scales. Develop a history on each cow in your herd: her birth date; sire and dam or breed combination; breeding and calving dates; calf sex and weaning weights; vaccination records, mature body weight, and any abnormal circumstances.

After you develop these record keeping habits, begin to compare expenditures by month and year. Chances are you will notice, and be able to eliminate some unnecessary expenses. You will also be able to determine your production costs at various times and use this information to make informed market decisions. Your relative production cost status will become apparent by comparing your production costs with those of other operations. Your accountant will appreciate your efforts and be able to make better financial recommendations. You will also be able to determine which are your most efficient cows, which cows you should cull and what is a reasonable price to ask for, or accept when she sells. Without this information, it's difficult to determine the value of your beef operation or to make informed decisions concerning it.

Source: Dale Miller, Extension Specialist, Animal Husbandry
NEW BUNCOMBE COUNTY SMALL FARMS INITIATIVE

More and more farmers have been sharing with our agents that they desire to continue to farm but are desperately looking for ways to increase the income from their farming operation to preserve the farm. With the support of our Buncombe County Commissioners and County Management, Cooperative Extension is initiating a program to aggressively work to help farmers diversify their operations, add value to their product or market products differently in order to increase the income from their operations.

One of the ways that we want to approach this project is to develop a website with a listing of farm operations and the products that you have available for sale. We want this listing to include livestock, poultry, rabbits and animal products along with fruits, vegetables, nursery plants and value-added products. Currently, Mike Ford is coordinating this effort for us. We would appreciate it if you would call Mike at 255-5522 to indicate your interest to being listed. We realize that many of you don’t really utilize computers at the present time, but just being listed should increase the demand for your farm products.

Over the next few months, you will be hearing more about this effort as numerous workshops will be planned to help you feel comfortable trying some of these other approaches to generating income from the farm. At this point, our office is optimistic that funding will be available to create a new Extension Agent position, dedicated to this Small Farm effort.