Got Feed for the Winter?
Eileen A. Coite, Wayne County

We can all look at getting ready for the winter season in different ways. If you are in the cattle business, is your cow herd ready for the approaching winter months? I guess what I am really asking is: Do you have enough to feed your herd through the winter? There are other factors to consider but this is the primary means of getting through the cooler months of the year, when forages will be limited and more energy is needed to grow, lactate, and stay warm.

The first question to answer is “How much does a cow eat?” According to Dr. Matt Poore, Extension Beef Specialist at NC State University, a mature lactating cow needs approximately 2.3% of her body weight in dry matter. Since most hay contains 90% dry matter, she will need 2.6% on an “as fed” basis. We also need to consider that she will waste about 15% of what is fed, so it’s best to calculate for 3% of her body weight when planning. For example, a 1200 pound cow will eat approximately 36 pounds a day. Multiply this across 165 days (the typical feeding period for the winter months—October 15 to April 1—and you get 5940 pounds or about 3 tons! Considering the typical 4x5’ round bale weighs about 750 pounds, she will need about 8 bales.

Dr. Poore has provided us with an additional tool to assist you with planning a feed budget during this time or really anytime throughout the year. He has developed a feed budget calculator for estimating cattle feeding needs. Contact your county livestock agent for assistance with calculating and we can help you make sure to have enough forage and/or feed for getting through the winter.

Some of the items we will need to know are as follows:
- number of cows, both dry and lactating
- date the dry cows will start calving
- average weight of cows
- number and average weight of bulls
Got Feed for the Winter? Continued...

- number of weaned heifers/steers and weight of them
- dates of feeding period
- feed you have available: forages, concentrates

Now is a great time to make sure you can feed your herd until the spring and if not, purchase hay, by products or concentrate feeds to make it through.

Feel free to contact us to plan your feed budget for the winter. If you are not a cattle producer, but rather in the sheep or goat business, we can certainly help you with a feed budget as well. Similar information will be needed as with the cattle feed budget listed above.

NCDA&CS seeks to reduce postage costs, save paper by putting soil test and other agronomic reports online

Beginning Nov. 1, NCDA&CS will no longer routinely mail out paper copies of agronomic reports (soil tests, nematode assays, plant tissue, waste, solution and soilless media analyses). All these reports are readily available through the NCDA&CS Agronomic Division’s Web site, www.ncagr.gov/agronomi

By making the switch to electronic-only reports, the NCDA&CS will work within its limited budget. Online reports are available to clients faster than mailed reports and make record keeping much easier. Clients who provide a valid e-mail address on their sample information form, or who register an e-mail address with the Agronomic Division online, can receive electronic notification.

Or you can go online to the NCDA&CS Agronomic Division’s Web site, www.ncagr.gov/agronomi, find the link for “Find Your Report” in the left column, then do a “Quick Report Search.” Anyone who has difficulty using the PALS report-search feature or has questions can call (919) 733-2655 for assistance during regular weekday office hours.

Let us introduce Janet “Jan” Archer
Submitted by the North Carolina Pork Council

It’s a tough time to be a pork producer. Historically high production costs, attacks from activist groups and misinformation about our industry all conspire against us. The North Carolina Pork Council’s mission is to “promote and educate to ensure a socially responsible and profitable North Carolina pork industry”. That’s a pretty tall order these days. Along with promoting our product, defending our industry, explaining the truths of modern pork production to regulators and informing producers to lawmakers; the North Carolina Pork Council works to educate pork producers. With that in mind, the North Carolina Pork Council has contracted with Jan Archer to help fulfill this part of its mission. Jan Archer brings over 30 years of pork production and education experience to her role as director of Producer Education and Outreach.

A graduate of Michigan State University, Jan has worked in all facets of the pork industry and is involved in her family’s sow farm in Wayne County. Jan is certified as a Pork Quality Assurance Plus (PQA Plus) and Transport Quality Assurance (TQA) advisor so she is able to go on farms to certify producers and production employees in these important national programs. She is also able to walk producers through their PQA Plus site assessments that are increasingly being required by local packers. She is available to bring topical seminars to producer groups including, euthanasia recommendations and requirements, creating an acceptable barn culture on your farm and workforce development. To reach Jan, contact the North Carolina Pork Council at (919) 781-0361 or email Jan directly at jarcher3@nc.rr.com.
Minerals for Goats
Submitted by Eve H. Honeycutt, Lenoir and Greene Counties


Minerals are often overlooked in goat production, but production would not be possible without them. While most minerals are provided in the diet of a grazing goat, sometimes goat producers need to provide a few supplements. In order to achieve maximum production levels, it is necessary to provide a free choice complete goat mineral supplement or a 50:50 mix of trace mineralized salt and dicalcium phosphate.

1. Calcium - Major functions include blood clotting, membrane permeability, muscle contraction, nerve function, cardiovascular functions and enzyme activity. Adequate levels of calcium for lactating goats are necessary to prevent parturient paresis (milk fever). In browsing or grain-fed goats, the addition of a calcium supplement (dicalcium phosphate, limestone, etc.) to the feed or to a salt or trace mineral-salt mixture usually meets calcium requirements. Legumes (e.g., clover, alfalfa, kudzu) are also good sources of calcium.

2. Phosphorus - Works in combination with calcium bone formation and is essential for cell growth, energy utilization, acid:base balance, and is required by rumen microbes for optimal growth and activity. Phosphorus deficiency results in slowed growth and an unthrifty appearance. Lactating goats can maintain milk production on phosphorus-deficient diets for several weeks by using phosphorus from body reserves, but during long periods of phosphorus deficiency, milk production was shown to decline by 60%. The calcium:phosphorus ratio should be maintained between 1:1 and 2:1, preferably 1.2-1.5:1 in goats due to their predisposition for urinary calculi.

3. Magnesium - Its primary function is in carbohydrate and fat metabolism and is a component in many enzyme systems. Magnesium deficiency is associated with grass tetany, but ordinarily this condition is less common in grazing goats. Goats do have an ability to compensate for low magnesium by decreasing the amount of magnesium they excrete via the urine and that used for milk production.

4. Potassium - Functions to keep the correct fluid balance throughout the body and has an important role in metabolism. Forages generally are quite rich in potassium, so a deficiency in grazing goats would be extremely rare.

5. Iron - Important role in cellular respiration and oxygen transport via hemoglobin. Iron deficiency is seldom seen in adult grazing goats, but more commonly in kids fed in complete confinement. Iron deficiency can be prevented by access to pasture or a good quality trace mineral salt containing iron. In severe cases, and for kids reared in confinement, administer iron dextran injections at 2- to 3-week intervals (150 mg, IM).

6. Iodine - Associated with the thyroid hormones that regulate the rate of metabolism. Conditional iodine deficiency may develop with normal to marginal iodine intake in goats consuming goitrogenous plants such as cottonseed and soybean meal. Severe deficiency of iodine results in an enlarged thyroid; poor growth; small, weak kids at birth; and poor reproductive ability. Iodine should be provided in stabilized salt.

7. Zinc - Important factor in stress management, immune response, enzyme systems and protein synthesis. Zinc deficiency results in parakeratosis, stiffness of joints, smaller testicles, and lowered libido. A minimal level of 10 ppm of zinc in the diet, or a trace mineral salt mixture of 0.5-2% zinc prevents deficiencies. Excessive dietary calcium (alfalfa) may increase the likelihood of zinc deficiency in goats.

8. Selenium - Deficient in most areas of the Southeast. Many commercial trace mineralized salts are devoid of selenium. Selenium and vitamin E work together to prevent white muscle disease, retained placentas and to reduce susceptibility to worms and disease.

9. Water Requirements - Water is involved in almost all of the body’s normal functions. As with the other nutrients discussed, needs vary with age and stage of production. A good rule of thumb is that does early in lactation typically have the highest requirements along with times of intense environmental heat where forages are extremely dry. Other factors that may affect individual water requirements include water content of forage consumed, amount of exercise, and salt and mineral content of the diet. Since water is crucial for optimal production, growth and performance it is vital that all goats have access to unlimited amounts of fresh, clean high quality water.
Don’t forget the Mineral Supplement this Winter
Submitted by Emily Herring, Pender County

With winter approaching us quickly it is important to keep in mind the nutritional status of your cattle. Having plenty of hay on hand, a mineral supplement program, adequate pastures, reasonable feeding rations and ample shelter are all important items to remember when going into this colder season.

Forages may provide the energy and protein that a cow needs, but most of the time they are always deficient in one or more mineral. The two major minerals that have been shown to be the most deficient in the southeast are salt and magnesium. While the three main trace minerals to be most likely deficient across the country are zinc, copper, and selenium.

Using trace mineralized salt blocks (“red salt”), sulfurized salt (“yellow salt”), or plain white salt blocks as the mineral program is not sufficient enough for cattle because salt is the only mineral being received. For example, the trace mineralized salt block contains salt and some other trace minerals. Granted it helps, but it’s still not providing magnesium or selenium or enough levels of zinc or copper to help.

The eastern portion of the US is known for its fertile, lush pastures and because of this a “high mag” complete mineral is recommended to be used at all times unless in an area where grass tetany is rare. If grass tetany is rare, it is still recommended to use the “high mag” block from 30 days before the cows calve with the end of the abundant growth in late spring.

A “high mag” complete mineral contains 8-12% magnesium. Producers should buy a product that is labeled for consumption at 4 oz/day per cow. It should have 8% or higher magnesium, at least 0.09% copper (900 ppm, from copper sulfate or chloride), at least 0.18% zinc (1800 ppm), and at least 0.0026% selenium (26ppm). The supplement should be available free choice at all times. It should be in a covered feeder, kept fresh and dry. The daily intake should be monitored to ensure the cows are consuming the recommended amount. Also, your cattle could be used to the high levels of salt in the beginning, so don’t worry if your cows seem to consume a large amount when first put out in the feeder. They should start minimizing their consumption levels after several weeks to the suggested target levels. If you are having problems getting the recommended levels of intake consumed, consider mixing in dry molasses or grain to encourage initial consumption. If you are not satisfied with the levels of consumption, either being too much or too little, consider contacting the manufacturer for advice or consider changing products.

Biosecurity to Protect Against HINI
Submitted by Emily Adams Walton, Onslow County

Source: National Pork Board Public Health Fact Sheet, Influenza: Pigs, People, and Public Health

According to the National Pork Board, here are some biosecurity measures that are potentially useful to reduce transmission of influenza viruses between people and pigs:

**Influenza virus vaccination of pigs** - While the swine influenza virus vaccines used today may not induce sterilizing immunity nor completely eliminate clinical signs of infection, vaccination of pigs can reduce the levels of virus shed by infected animals, and thus reduce the potential for human exposure and zoonotic infections.

**Influenza virus vaccination of swine farm workers** - The vaccines produced on a yearly basis for the human population contain only human, not swine, strains of influenza viruses. Nonetheless, these vaccines are likely to provide some level of protection against infection with swine viruses of the same hemagglutinin subtype. Conversely, vaccination of farm workers will reduce the amounts of viruses they shed if infected during human influenza outbreaks, and thereby limit the potential for human influenza virus infection of their pigs.

**Sick-leave policies** - To further reduce the chances for infection of pigs with human influenza viruses, the farm owner should provide sick-leave policies for employees that encourage them to re-
main away from work when they are suffering from acute respiratory infections. People typically shed influenza viruses for approximately 3-7 days, with the period of peak shedding correlated with the time of most severe clinical illness.

**Ventilation** - Ventilation systems in containment production facilities should be designed to minimize re-circulation of air within animal housing rooms. This is important to reduce the exposure of pigs to viruses from other pigs, to reduce their exposure to human influenza viruses, and conversely, to reduce exposure of workers to swine influenza viruses.

**Basic hygiene practices** - Workers should change clothes prior to leaving swine barns for office facilities, food breaks or their homes. In addition, hand-to-face contact should be minimized and hand-washing stations should be available throughout the animal housing areas. Influenza viruses spread not just by inhalation of aerosolized virus, but also by eye and nose contact with droplets of respiratory secretions.

**Interspecies transmission among pigs and birds:** The global reservoir of influenza viruses in waterfowl, the examples of infection of pigs with waterfowl-origin influenza viruses, the risks for reassortment of avian viruses with swine and/or human influenza viruses in pigs, and the risk for transmission of influenza viruses from pigs to domestic turkeys all indicate that contact between pigs and both wild and domestic fowl should be minimized.

The following factors are potentially useful to reduce transmission of influenza viruses between birds and pigs:

- **Bird-proofing** - All doorways, windows and air-flow vents in swine housing units should be adequately sealed or screened to prevent entrance of birds. Although small birds such as sparrows, swallows, finches, wrens etc. are not thought to be important in the overall ecology of influenza viruses, they may carry influenza viruses from waterfowl feces into barns on their bodies.

- **Water treatment** - Do not use untreated surface water (because of waterfowl fecal contamination with influenza viruses) as either drinking water or water for cleaning in swine facilities. Likewise, it may be prudent to attempt to minimize waterfowl use of farm lagoons.

- **Separation of pig and bird production** - Do not raise pigs and domestic fowl on the same premises.

- **Feed security** - Keep pig feed in closed containers to prevent contamination with feces from over-flying waterfowl.

- **Worker biosecurity** - Provide boots for workers that are worn only within the pig housing units, thus eliminating the chance to carry bird feces into housing units from outdoors.

These recommendations clearly cannot apply to production units in which pigs are raised outdoors. Outdoor housing places pigs at increased risk for infection with avian influenza viruses.

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**Forage Management Tips**

**November**

- To improve feeding efficiency, test forages before winter feeding begins.
- As winter feeding begins, separate the herd into lactating and dry cows so the best quality pastures and hay can be fed to the cows with nursing calves.
- Do not graze fall-planted perennial pastures, such as tall fescue/ladino clover, until growth reaches 6 to 8 inches.
- Winter annual pastures that were planted early (September) may be responsive to an additional application of nitrogen (30 to 50 lbs per acre).
- Bermudagrass should have 3 to 4 inches of growth to serve as an insulation against winter damage.

**December**

- Avoid overgrazing by feeding hay on pasture or restricting acres available to animals.
- Feed hay stored outside before using hay that is stored inside.
Calendar of Events

- **November 12th - Bull Reproductive Evaluation Day**, Bulls will be evaluated at the East Carolina Agriculture and Education Center in Rocky Mount. Estimated cost of evaluations is $35.00. Call (252) 641-7827 to preregister your bulls.
- **November 12th, 4 - 8 pm - Winter Feeding and BQA workshop**, CEFS/Cherry Research Farm, call 731-1520 to register.
- **January 28th - Wayne County Cattlemen’s Association Annual Meeting**, Wayne Center

Animal Waste Continuing Education Credit Classes

- **November 19th - Southeast Pork Conference**, Jones County Civic Center, Trenton, 9 am - 4 pm, 6 hours CEC credits, to register call (252) 527-2191 PRE-REGISTRATION REQUIRED
- **November 20th - Sampson County** Animal Waste Operators 6 hour CEC class, for more information (910) 592-7161
- **November 24th - Wilson County Pork Conference 5:30 - 8:30**, 2 1/2 CEC, to register call (252) 237-0111
- **December 1st - Bladen County** Animal Waste Operators 6 hour CEC class, for more information call (910) 862-4591
- **December 7th - Duplin County** Animal Waste Operators 6 hour CEC class, for more information call (910) 296-2143
- **December 8th - Robeson County** Animal Waste Operators 6 hour CEC class, for more information call (910) 671-3276
- **December 9th - Pitt County** Animal Waste Operators 3 hour CEC class for more information call (252) 902-1703

*For more information about any of these events, please call Kim Davis at 731-1520

Fencelines is a bimonthly newsletter written by a team of Southeast District Agricultural Agents for livestock producers of Southeastern North Carolina. For more information on material and events presented in this newsletter, contact your local agent and Cooperative Extension office at:

**Eileen A. Coite**

*Extension Agent*

Livestock & Forage

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