Are your goats protected from enterotoxemia, otherwise known as overeating disease? What about tetanus? If you are in the goat business but aren’t familiar with these diseases, or if you haven’t had a chance to vaccinate for them you might want to consider. Enterotoxemia and tetanus are similar diseases because they both are caused by clostridial bacteria that can be found in the environment or in animals. Because of these similarities, the vaccines for both are often combined in one dose and make it easier to administer and lower the cost from having to give two vaccinations. Let’s take a look at each of these diseases and why they are a concern.

Enterotoxemia, or overeating disease as it commonly is called can affect goats of all ages, and can often be fatal. It usually is a bigger concern for young goat kids and often those that grow the fastest or those that over-consume feed after becoming excessively hungry, hence the term “overeating disease”. What happens is that normal bacteria found in the intestines of goats (and also found in the soil) reproduce rapidly and release high amounts of toxins in the gut. How can we prevent overeating disease? If you add grain to a goat’s diet, or change their diet in any way, make all changes gradual. This might mean taking a couple of weeks to introduce the new diet to allow the goat’s system to acclimate to the diet. Vaccinating for *Clostridium perfringens* types C and D will also protect against enterotoxemia.

Tetanus is caused by the bacterium *Clostridium tetani*. It is a neurological disease caused by this toxin, which is found in manure and also in the soil. It is very similar to the tetanus we are vaccinated for every ten years or if an injury occurs. Tetanus bacteria can enter the body of goats through wounds due to
Preventing Enterotoxemia and Tetanus in Goats Continued...

castration, disbudding, ear tagging, etc. The disease symptoms might not show up for several days after the wound takes place, but if affected, neurological problems will arise, such as muscle spasms, stiffness, and the common “lockjaw” symptom when they have difficulty opening their mouth. If not treated an animal will eventually go down permanently and die.

Make sure your goat herd is protected against these deadly bacterial diseases. Vaccines such as the 3-way “C-D-T” vaccine are available to prevent from both. Check the label for administration instructions and withdrawal times. These vaccines can be given through subcutaneous or intramuscular injection. Withdrawal times (the amount of time from treatment to marketing the animal) is usually 21 days for vaccines. Again, follow the label for vaccine handling, administering, and withdrawal instructions. For more information on vaccinating or preventing diseases in your goats or other livestock, contact your Cooperative Extension office for animal husbandry publications, or contact your veterinarian.

Natural vs. Organic Beef: Is It For You?
Margaret A. Bell, Craven & Jones Counties

Over the past few years, “organic” and “natural” have become household terms. But what exactly do these terms mean? Is organic nutritionally better for you? Should you only eat food that is labeled as “antibiotic-free” and “hormone-free?” Let’s dig a little deeper into what these terms exactly mean for you as a producer.

Natural beef has become a legitimate option for many beef producers. It often offers a higher premium ranging from about $4 - $8 cwt. for calves and $2 - $4 cwt. for feeder cattle. Of course, these premiums depend on many factors, including quality, quantity, and location of the cattle. This increase in the product is usually necessary to offset the extra cost of management practices used to enable the producer to market their product as “natural.”

If a producer wants to market his product as “natural,” he has to do several things: 1) the product is to be processed as minimally as possible 2) the product is not allowed to have any artificial ingredients 3) the product is not allowed to contain any preservatives. However, the United States Department of Agriculture (USDA) has no restrictions on the specific management practices during the life of the animal.

Organic beef is a term used to describe beef cattle that have not had any antibiotics or growth hormones. This type of beef is produced without using most common pesticides or fertilizers that are made from synthetic ingredients. One of the most credible ways to have your product labeled as organic is to get the “USDA ORGANIC” seal on your product, which means the product is at least 95 percent organic.

There are many management requirements you must consider if you are thinking about producing organic beef. You must abide by the following: 1) animals must be not given any antibiotics or growth hormones 2) producers are to give their animals 100 percent organic feed, but are allowed to provide vitamin and mineral supplements to the animals 3) preventive management practices will be used to keep the animals healthy, such as vaccines. However, the USDA does not make any claims that food produced organically is more nutritious or safer than food that is produced conventionally. The difference is how organic food is handled, grown, and processed.

In summary, if you are considering becoming an organic beef or natural beef producer, there are many options to consider and many factors to think about. Only you can decide what is best for you and your beef cattle, but the organic and natural beef markets will continue to thrive for the next few years. This may be a good opportunity for you to increase the value of your cattle and the return on your cattle. If you have any questions, you can contact your local Cooperative Extension Agent.

The Situation
While attending the Swine Educators In-Service Training in Iowa I learned general information about a farm in Michigan who is converting from a sow gestation stall housing system into a gestation pen housing system. The reason for this change has been credit to the passing of legislation which passed in 2009 which prohibits sow gestation crates, stalls for veal calves, and cages for chickens. Discussions between the Michigan Pork Producers and the Allied Poultry Industries Association and HSUS resulted in a bill that included confinement standards as dictated by the HSUS. These groups felt that an HSUS-driven ballot initiative would be too expensive to fight and might include even tougher regulations. In negotiating the legislation, HSUS said it would “not pursue a Michigan farm animal confinement-related ballot measure prior to the effective date of the law.” The law does not come into effect until 2020 so this would give producers time to convert typical stall housing gestation systems into pen gestation houses. Within the law it is acceptable to have stalls for breeding and for farrowing. The sows can stay in the stall until “confirmed pregnant” and then they are moved back into a pen. They are then moved into a farrowing crate one week before they are due to farrow.

Designing the Barns
The particular farm that was showcased at the training was Dykhuis Farm sow farm with 15,500 sows in 5 different commercial sow units and one breeding stock herd in West Michigan. The design of the buildings all vary somewhat from one building to another. They have a formula they go by for planning a barn for the number of pens needed; farrowing target multiplied by number of weeks in the pen (10). As a general rule at their farm, the stocking rate is 15 square feet per sow and by the end of gestation the goal is 18 square feet per sow. This includes their estimated fall out rate for that pen. Then they use another formula to determine stalls needed for bred sows; breeding target multiplied by number of weeks in the stall (6). Also, in designing barns they have to figure in the number of stalls needed for the hospital area, gilts, and wean sows. Another general rule of 2 sows per feeding box is implemented. Depending on the size of the pen and how it is designed the distance between the feed boxes vary from 18” to 4’ on their farm. So the actual inside design of the barn depends on several factors like size, shape and style of the barn along with the farrowing target rate.

Health Management
Pens are grouped by their due date/breed date and then by their size and parity. When pens are mixed for the first time an extra serving of food is delivered for 2-3 days to the sows to help minimize fighting. If a sow was to become sick, lame, or thin they are removed from the pen and placed in a hospital stall for 35 days to regain body condition and/or health. When sows come into heat they are checked, marked and then moved out of the pen to stalls where they are bred. Vaccinations and ultrasounds are said to be easier done in the pen versus a stall when all the sows are distracted by feed. When sows are due in a week to farrow they are then marked and moved into farrowing crates. They started converting their farms in late 2009 to try to meet the new rule. Since then, the houses that are pen gestation have had close to the same production numbers as they normally would have been in stalls.

Conclusion
Seven states have passed such laws to band or limit usage of crates, either through legislation or ballot initiatives. States included are Arizona, California, Florida, Maine, Colorado, Ohio, Michigan, and Oregon. All of the following states are ballot initiative states. North Carolina is not a ballot initiative state and this explains why North Carolina has not been affected yet by these types of laws. I thought this was important to bring to your attention because eventually this may become the situation for North Carolina farmers too. Farmers need to be aware of the animal welfare/rights organizations and what they are doing because 7 out of 50 states already have laws prohibiting any or all of the listed, gestation crates, cages for chickens and stalls for veal calves. The information the farm representative spoke on regarding their farm was great to learn about because of the lack of experience most farmers and myself have with pen gestation housing.
Managing Cover Crops for Grazing
Eve H. Honeycutt—Lenoir and Greene Counties

So you’ve planted your winter cover crop...now what? If you planted at the proper time - mid September - you should be seeing some great growth the past few weeks. (If you got a little behind and still have planted yet, there is still time. As long as there is about 3-4 weeks of warm days, cool nights, and adequate moisture, your cover crop has time to germinate and get some growth to avoid a winter kill.)

**The Benefits:** By choosing to plant a cover crop for grazing, you have done yourself a favor in more ways than one. All of the cover crops (rye, and oats being the most common) are great erosion fighters. They have extensive, soil holding root systems, and establish quickly even in poor, rocky, or wet soils. The dense yet shallow root systems act as soil builders, improving water infiltration. The rapid above-ground growth helps supply organic matter. There is usually little weed pressure until spring, but if you planted properly, the stand density will shade out most of your weeds and prevent seeds from germinating. You have also provided a cheap and efficient source of winter feeding, which is way more convenient and economical than feeding hay.

**What to Expect:** No matter what cover crop you chose most of them will behave about the same throughout the cool season. These crops love warm days and cool nights, with just the right amount of rain. If you plant early enough, you might be able to graze it before the first frost. However, during the coldest weeks between January and February 15, there will be little growth. Grazing should be reduced during this time to allow the stand to survive. By mid-March, the weather should be optimal for great growth and any animal grazing should be quite satisfied.

**Maintenance:** Avoid overgrazing or mowing cover crops closer than 3 to 4 inches. For average phosphorus and potassium conditions (based on soil test), apply 500-600 pounds of 10-10-10 at planting. On sandy soils make additional applications of 60-80 pounds of nitrogen per acre when plants are 2-3 inches tall in November, and topdress with 50 pounds of nitrogen on or near February 15.

**The Disadvantage:** The biggest downfall with using a cover crop in established bermudagrass pastures, hayfields, or sprayfields, is timing. Around the middle of March to the middle of April, your cover crop is growing like crazy. The animals grazing on it will probably be standing knee-high in the most beautiful green grass. However, your bermudagrass, lying dormant beneath all this action, is waiting for it's chance to shine. In early April, bermudagrass needs constant sunshine in order to green up and get ready for the warm summer season, when many farmers depend on it the most. If your cover crop is still on top of it, you are going to deny it the energy it needs to thrive. This is where you have to make a crucial decision. Ideally, you would need to kill the cover crop (or at least mow it very close to the ground), in order to provide the bermuda the sunlight it needs to grow. It seems against the laws of mother nature to destroy the beautiful spring growth of a cover crop, so you have to decide which is more important. A stand of bermudagrass with a cover crop that lasts later into the spring will greatly reduce the first cutting of summer hay.

Cover crops are beneficial to all aspects of the farm— including the soil and the grazing animals. So bundle up, sit back, and dream about spring!

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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.
**Animal Waste Management Opportunities**

### Initial Animal Waste Operators Certification Class

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 18th &amp; 19th, 2011</td>
<td>Initial certification training for Animal Waste Operators, Lenoir County</td>
<td>Eve Honeycutt (252) 527-2191 or (252) 747-5831</td>
</tr>
</tbody>
</table>

### Continuing Education Opportunities

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Contact Information</th>
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</thead>
<tbody>
<tr>
<td>Nov. 9th 8:30 am</td>
<td>Eastern Carolina Cattle Conference Sampson County Agri. Expo Center $25.00 registration fee (2 hours)</td>
<td>NC Cattlemen’s Association (919) 552-9111 or <a href="mailto:bryan@nccattle.com">bryan@nccattle.com</a></td>
</tr>
<tr>
<td>Nov. 15th 8 am to 3 pm</td>
<td>Mortality Composting—Wayne County (5 hours)</td>
<td>Wayne NRCS (919) 734-5281, option 3</td>
</tr>
<tr>
<td>Nov. 16th 9 am to 3 pm</td>
<td>Pest &amp; Nutrient Management in Pastures at CEFS (3 Hours)</td>
<td>Lisa Forehand (919) 513-0954 <a href="http://www.cefs.ncsu.edu">www.cefs.ncsu.edu</a></td>
</tr>
<tr>
<td>Nov. 18th 9 am</td>
<td>Southeast Regional Pork Conference (6 hours) $5.00 registration fee with lunch</td>
<td>Diana Rashash (910) 455-5873</td>
</tr>
<tr>
<td>Nov. 23rd 5:30 pm</td>
<td>Wilson Pork Conference (3 hours) <strong>BONUS: PQA Plus recertification</strong></td>
<td>Walter Earle (252) 237-0111</td>
</tr>
<tr>
<td>Dec. 2nd 9 am</td>
<td>Bladen County Cooperative Extension Office (6 hours)</td>
<td>Becky Spearman (910) 862-4591</td>
</tr>
<tr>
<td>Dec. 8th 9 am</td>
<td>Hoke County Cooperative Extension Office (6 hours)</td>
<td>Randy Wood (910) 875-3461</td>
</tr>
<tr>
<td>Dec. 13th 9 am</td>
<td>Robeson County Cooperative Extension Office (6 hours)</td>
<td>Michelle Shooter (910) 671-3276</td>
</tr>
<tr>
<td>Dec. 16th 9 am</td>
<td>Richmond County Cooperative Extension Office (6 hours)</td>
<td>Tiffanee Conrad-Acuña (910) 997-8255</td>
</tr>
</tbody>
</table>
Hands On Goats XI Field Day
November 13th, 9:00 am to 3:00 pm
Johnston County Livestock Arena, Smithfield NC
County Home Road, Off 210 Hwy
Livestock Arena (919) 934-9569

Demonstrations
- Goat Milking
- Cheese Making
- Hoof Trimming
- Goat Skillathon
- Laparoscopic AI

Seminars
- Skin Diseases
- Mastitis
- Urinary Calculi/Kidney Stones
- Sheep & Goat Council

Bring the Whole Family
Lots of Fun and Lots to Learn

Raffle Ton Alfalfa Hay or $300 — Door Prizes

For More field day information contact:
Angela Allen, Pres. (919) 965-5976  Leslie Averill, Sec. (919) 965-9306
Johnston County Extension Agent Dan Wells (919) 989-5380

Need a new Herd Bull? Butner Bull Sale December 17th,
Granville County Livestock Arena.
Questions or for more details call Kim at (919) 731-1520

Extension Agent Contact information
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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:

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