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**Livestock Newsletter of the Southeast Extension District**

**Proper and Timely Euthanasia**

*Revised from the Pork Checkoff Fact Sheet: Timely Euthanasia –*

*Well-being and Financial Implications*

*Written by Margaret B. Ross- Livestock Agent, Craven and Jones Counties*

Margaret B. Ross, Extension Livestock Agent- Craven and Jones Counties

Submitted by: Margaret A. Bell, Livestock Agent – Craven and Jones Counties

It is reality that all swine farms may have sick, injured, or ill animals at some point, and unfortunately, euthanasia may be the best option. Timely euthanasia is extremely important to ensure the well being of the animal, as well as to lower costs associated with caring for compromised animals.

When deciding on the proper method for euthanasia, there are several considerations to be made: 1- human safety – not putting producers and employees in danger; 2- pig well-being – goal is to minimize stress or pain to animal; 3- technical skill requirements – method should be easy to learn and repeated with same outcome; 4- costs – needs to be economical for the producer; 5- aesthetics – should not be questionable to the employee performing the procedure; 6- limitations – certain methods are only suitable to particular sizes of pigs.

“Timely” euthanasia is defined as animals that are not showing improvement after two days of treatment or are severely injured or are non-ambulatory. Also, if an animal has a body condition score of 1 (scale goes up to 5), it should be euthanized right away. It is important to have a written plan for euthanasia and make sure employees and managers have the proper training they need to perform these procedures. By developing a plan, it becomes easier to decide if you need to treat an animal or if the animal needs to be humanely euthanized.

North Carolina State University conducted a research study, which showed that farms that euthanized compromised nursery pigs as soon as they arrived to the farm were able to improve the well-being profile of their farm herd seven-fold. It was also found that it was best to have clear-cut criteria for euthanasia so these difficult decisions are made with all the right aspects in mind.

Other factors that were used in determining euthanasia in nursery pigs in this study were: suspected of having a broken leg, skin wounds on all four quarters as well as both sides of body, abscesses 2.5 cm or larger, respiratory disease, and weak and difficulty getting to their water and feed. As you can see, there is a lot that goes into deciding on timely euthanasia of an animal. It is important to work with your integrator, farm manager, and employees to make sure you are all on the same page when this controversial topic presents itself.

For more information, contact your local Cooperative Extension Office and speak with your Livestock Agent or visit the National Pork Board online at pork.org.

**Winter Feeding Preparations Start Now**

*Submitted by:* *Stefani Garbacik, Livestock Extension Agent- Wayne County*

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As fall is approaching, the cooler weather is a welcome treat. This is also the perfect time for producers to be thinking about their cow herd and the (possible) challenge of winter feeding. The first step for planning your winter feeding is to figure out where you are **today**. What does your pasture look like? How is your hay supply? What does your cow herd look like in terms of numbers? How do they look in terms of condition?

A forage inventory should be performed to determine what you have, what you need, and what you can get. Take a look at your pastures and decided how much stockpiled grass you have. How many days can your herd use that forage? Examine your hay supply and determine amount of hay, quality of hay, and feeding/storage methods. The hay is sold in bales but your cows require feed based on pounds of dry matter…having an accurate idea of the weight of your hay is crucial in determining if you have enough to last the coming winter. It is advisable to have 25% more hay than you need to get through the winter. A forage test, performed by NCDA&CS for $10, can tell you the nitrate, fiber, moisture, and protein (plus many more) concentrations of your hay/silage sample.

The way you feed and store hay is vital in getting the most out of your forage supply. Loss is minimized when hay is fed with a ring feeder, and silage supplied in troughs. If fed on the ground, waste has been shown to exceed 30%. Hay should be stored under a shelter or covered in plastic, however this is not always feasible. According to NCSU Extension publication ANS 03-001B, outside storage will result in about 25% loss of hay, while plastic storage results in 10% loss and barn storage 5% loss. Take this into account when determining your hay availability.

The next step in developing a plan for winter feeding should be to examine the cow herd. How many cows do you have? What physiological stage (dry, lactating, developing, etc.) are they in? The body condition of your animals is also critical…they will only lose body condition as the winter progresses. Ideally animals should have a BCS of 5-7; you may have to employ a new supplementation program (starting in the spring/summer of next year) to make sure your cows have the appropriate body condition going into the fall and winter months.

There are several easy methods to determining the amount of hay you may need over the winter. Here is one quick example from NCSU publication ANS 03-001B:

* Expected feeding period: *90 days*
* Expected cow numbers: *25 cows*
* Expected cow weight in moderate condition (BCS approx. 5): *1100 lbs.*
* Expected cow intake: *2.5% of body weight*
* Expected cow intake in pounds: 0.025\*1100 lbs.=*27.5 lbs.*
* Expected total hay intake: 27.5 lbs./cow\*25 cows\*90 days= *61,875 lbs.*
* Hay offered increased by 10% to account for some waste: 61,875 lbs.\*1.1=*68,063 lbs.*
* Total hay needed (increased by a 25% safety factor): *85,079 lbs.*

**\*\*Remember the 5 P’s: Proper Planning Prevents Poor Performance\*\***

**MONITORING THE BODY CONDITION OF MEAT GOATS**:

*A Key to Successful Management*

Jean-Marie Luginbuhl, Extension Meat Goat Specialist and

Matthew H. Poore, Extension Animal Husbandry Specialist

*Submitted by Eve H. Honeycutt, Extension Livestock Agent, Lenoir and Greene Counties*

As the breeding season approaches producers should be concerned with the body condition of their breeding does Goat should not be allowed to become too thin or too fat.

Reproductive failure can result if does are under or over conditioned at the time of breeding. Clinical symptoms of over or under conditioned does may include: low winning and low

weaning rates, pregnancy toxemia and dystocia.

The term body condition refers to the fleshiness of an animal. We have devised a 1 to 9 â€“ point graduated scale, adapted from the beef system used in North Carolina. In this

graduated scale, thin is 1 to 3, moderate is 4 to 6 and fat is 7 to 9. In most situations, goats should be in the range of 4 to 7. The ideal body condition score (BCS) just before the

breeding season is between a 5 and a 6. The easiest areas to feel and touch to determine the body condition of an animal are the ribs on either side of the spine, by running a hand over those areas and pressing down with a few fingers. In well conditioned goats, the backbone

does not protrude and is flush with the loin. Other areas to monitor are the shoulders, the tail head, the pins, the hooks, the edge of the loins and the backbone. Does in good condition

(BCS = 5 or 6 have a smooth look and the ribs are not very visible. The backbone and edges of the loins are felt with pressure but they are smooth and round and feel spongy to the touch. Does in poor condition (BCS = 4 or lower) look angular, the ribs are visible and the backbone and edges of the loins are sharp and easily felt.

When body condition start to decrease, it is a sign that supplemental feed is needed or that animals should be moved to a higher quality pasture. Waiting until goats become thin to start improving their feeding regime may lead to large production losses and will increase feed costs.

If bucks are overfed and become too fat (BCS = 7 or higher), they may have no desire to breed does. Conversely, bucks that are thin (BCS= 4 or lower) at the start of the breeding season may not have sufficient stamina to breed all the does. Therefore, they need to be in good body condition (BCS = 6) and physical shape before the season starts.

Pregnant does should not have a BCS of 7 or above toward the end of pregnancy because of the risk of pregnancy toxemia (ketosis) or dystocia. In addition, a BCS of 5 to 6 at kidding should not drop off to quickly during lactation.

TABLE 1. BODY CONDITION SCORING CHART

BCS 1 Extremely thin and weak, near death.

BCS 2 Extremely thin but not weak.

BCS 3 Very thin. All ribs visible. Spinous processes prominent and very sharp. No fat cover felt with some muscle wasting.

BCS 4 Slightly thin. Most ribs visible. Spinous processes sharp. Individual processes can be easily felt. Slight fat cover can be felt over the eye muscle.

BCS 5 Moderate. Spinous processes felt but are smooth. Some fat cover felt over eye muscle.

BCS 6 Good. Smooth look with ribs not very visible. Spinous processes smooth and round. Individual processes very smooth, felt with considerable pressure. Significant fat cover felt over eye muscle.

BCS 7 Fat. Ribs not visible, spinous process felt under firm pressure. Considerable fat felt over eye muscle.

BCS 8 Obese. Animal is very fat with spinous processes difficult to feel. Ribs can not be felt. Animal has blocky obese appearance.

BCS 9 Extremely obese. Similar to an eight but more exaggerated. Animal has deep patchy fat over entire body.

**Testing Your Hay is Money Well Spent**

*Submitted by:* *Paul Gonzalez, Livestock Extension Agent- Duplin County*

With the cooler nights and shorter days comes the chore of feeding hay. No doubt some of you have already started feeding hay to your cattle. Those who aren’t, I’m sure soon will be. One management practice that should go hand in hand with hay feeding is testing your hay. This is a service from the NC Department of Agriculture and Consumer Services (NCDA&CS). A simple test can save you a lot of heartache down the road. Most of you will just have your hay tested for nitrate levels, and if that is all you really want, the test is free. However, I recommend a complete analysis. We’ll cover nitrate levels first.

Nitrate poisoning is caused when an animal consumes a feed source that is high in nitrates. In the animal's stomach that nitrate is converted to nitrite. The nitrite is easily absorbed into the blood stream where it converts blood hemoglobin to methemoglobin, which cannot carry oxygen. The result is that the animal dies from a lack of oxygen. Symptoms of nitrate toxicity included labored breathing, muscle tremors, and a staggering gait after which the animal collapses, gasps for breath, and dies quickly. The membranes of the mouth are bluish from a lack of oxygen and the blood is chocolate-brown but turns brighter red when exposed to air.

 What factors can cause nitrate accumulation? Basically, drought, reduced sunlight, excessive soil nitrogen, and young plants cause it. Drought and reduced sunlight cause nitrate accumulation due to the fact that the plant is not growing and utilizing the nitrogen it has absorbed. Manly plants, such as sorghums, will take up excess levels of nitrogen if it is present. This is particularly true of young, immature plants.

 The levels of nitrate to worry about vary according to the form of the forage. Research in Europe has shown that nitrate levels as high as 2%, or 20,000 parts per million (ppm), cause no serious problems while the forage is fresh. Once forage is dried down the potentially harmful nitrate levels change. Levels of 0% - 0.25%, 0 - 2,500 ppm, are generally considered safe for all classes of livestock. Levels of 0.26% to 0.5% should be used with caution and should be limited to one-half of the total ration of pregnant cattle and young animals. They should also not be fed with liquid feed or other non-protein nitrogen supplements. These levels can cause early term abortions and reduced breeding performance. If the levels from 0.6% - 1.5%, the forage should comprise no more than one-quarter of the ration. At these levels, we would also expect mid to late term abortions, weak calves, reduced milk yield, and decreased growth. Levels over 1.5% would give acute toxicity and death. This forage should only be used in a total mixed ration where the forage is limited to 15% of the total ration. These levels apply to cattle and goats. Those of you feeding horses will want to keep the nitrate level at or below 0.5% of the total dry matter diet. The “rule of thumb” is to select forage that has no more than 0.65% nitrate ion on a dry matter basis.

 There are ways to manage around nitrate situations. First, no matter what the source, do not over-apply nitrogen. Apply at agronomic rates. Second, be aware that certain crops under adverse weather conditions are more susceptible to nitrate accumulation. Plan grazing and mowing schedules accordingly if at all possible. You may also consider planting forages with a relative lower risk of nitrate accumulation. Third, have your forage source analyzed for nitrate content. You can then feed based on a known level of nitrate. It is also advisable to check the water source for nitrate levels. Cattle will adapt to higher levels of nitrate over time. Once acclimated, slightly higher levels can be fed safely.

 You may have heard of producers losing animals to nitrate poisoning from hay that was “pumped on” or “had litter put on it”. While it is possible, the use of these fertilizer sources does not automatically result in high nitrate levels. If used properly, meaning at agronomic rates, these sources are no more likely to cause high levels than commercial sources. Additionally, if used in excess or at the wrong time, commercial sources are just as likely to cause a nitrate problem. Be safe and have the forage tested. Even at recommended rates, any nitrogen containing fertilizer can cause a nitrate situation in forage.

 Currently, a complete analysis from NCDA&CS only costs ten dollars per sample. Typically you can have the results back in a week to ten days. Why do I recommend a complete analysis? The results will provide you with information such as crude protein, total digestible nutrients, and mineral levels that you can then use to make sure you are meeting the nutritional needs of your herd, flock, or horse. You can then choose the necessary supplementation if your hay does not meet their requirements. In some cases, you may even find that you are supplementing too much or that you don’t need to at all. There is a box on the form to request extension help if you need some help with interpretation of the results. We can even help determine what supplementation is needed and the best way to provide it. All you have to do is call the office.

Such was the case with one local producer who tested his hay. After sitting down and looking at the results, we decided his hay was better than he expected it to be. We then formulated a feeding plan in which he fed the hay based on cattle needs and hay quality. He usually just fed starting at one field and worked his way around to all of them. By feeding in a specific order based on the sample analysis, he met his herd’s needs without any other supplementation needed. It may not sound like a big deal but he saved several thousand dollars in feed costs that winter. And who of us couldn’t use several thousand dollars extra every now and then!

**Forage Management Tips**

**October**

* Finish using summer grasses before grazing the cool season ones.
* Overseed bermudagrass and other warm season grasses with winter annuals such as rye if you haven't already done so.
* Sample soils to be overseeded or planted next spring so the limestone can be applied early enough to react; two to four months are required for lime to effectively neutralize soil acidity.

**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 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**

If no contact information is listed, please contact Margaret Ross at Margaret\_Ross@ncsu.edu for details.

October 6: Jones County 4-H Livestock Club meeting, 6:00 PM, Jones County Cooperative Extension Office

October 6: Pork Quality Assurance for Adults and Youth producers, 7:00 PM, Jones County Cooperative Extension Office, following the Jones County 4-H Livestock Club meeting. RSVP (free) to Regina Gardner at the Jones County Cooperative Extension Office at (252) 448.9621

October 10: Coastal Carolina Agricultural Fair entries due to the Craven County Cooperative Extension Office. Mail to 300 Industrial Dr., New Bern, NC 28562 or email to Margaret Ross at Margaret\_Ross@ncsu.edu

October 11: Household Hazardous Waste will accept farm pesticides. For more information visit website http://www.coastalenvironmentalpartnership.com/hazardous-waste.html

October 13: Craven / Jones Livestock Association Meeting. More details to follow. Email Candice Morgan at candice.eller@gmail.com to have your name added to the list as well as to RSVP for the meetings

October 21: Coastal Carolina Agricultural Fair Check-In Day for poultry ONLY or poultry AND livestock entries, 10AM - 6PM. Visit the Craven County Cooperative Extension website at www.craven.ces.ncsu.edu for the premium guide and more information

October 22: Coastal Carolina Agricultural Fair Check-In Day for livestock ONLY. No poultry entries will be accepted today

October 23: Coastal Carolina Agricultural Fair Judging Day

November 1 - 2: NC State Fair Livestock Judging and Skill-A-Thon Competitions. Email Margaret Ross at Margaret\_Ross@ncsu.edu for more information

November 1: Craven County Farm-City Day, New Bern Farmer's Market and Tryon History Center. Emil Mike Carroll at Mike\_Carroll@ncsu.edu for more information and to register for a vendor booth

November 3: Check out day for all livestock at the Coastal Carolina Agricultural Fair

November 6: Animal Waste Operator CEC. Six 1-hour classes, Jones County Cooperative Extension Office. Sign up (free) by calling Regina Gardner at (252) 448.9621

November 8: Chick Chain Show and Sale, Lenoir County Livestock Arena

November 15: Southeast Bull Expo and Sale, Clinton Livestock Facilities. Contact Mark Wilburn for more information at (336) 953.0521

December 2: Eastern Carolina Cattlemen's Conference, Sampson County Agri-Expo Center, Clinton, NC. Email Paul Gonzalez for more information at Paul\_Gonzalez@ncsu.edu

December 8: Craven / Jones Livestock Association. See above meeting date for more information

December 19: Live Nativity Scene in Trent Woods

For Craven County Extension events, contact Lisa Wimpfheimer at (252) 633.1477 and for Jones County Extension events, contact Regina Gardner at (252) 448.9621. For all other events, email Margaret Ross at Margaret\_Ross@ncsu.edu.



**Certified Safe Farm Program**

 Craven County has been selected to participate in the Certified Safe Farm Program from 2014-2016 with funding from the NC Tobacco Trust Fund Commission. This program is a joint effort between NC Agromedicine Institute, AgriSafe of North Carolina and NC Cooperative Extension to provide occupational wellness reviews, personal protective equipment selections/fit tests, on-farm safety reviews and educational outreach to farmers and their employees. Participating farming operations that complete a Farm Safety Review with a score of 85 or higher are awarded certification and signage as a “Certified Safe Farm”. Participating farming operations that also include wellness tests receive certification as “Certified Gold Star Safe Farm”. An early participation incentive is available as matching funds (up to $500) for the first 10 participants making recommended safety improvements.

 Past participants of this program report lower health insurance claim costs, healthier families/employees and lower insurance costs. Contact the Craven County Extension office at (252) 633-1477 for more details or request information by email to : Margaret\_Ross@ncsu.edu.

We’re on the web!

http://craven.ces.ncsu.edu/

http://jones.ces.ncsu.edu/

http://cravenjoneslivestock.blogspot.com/

http://nchorse.blogspot.com/

**Fencelines** is a quarterly 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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