What is foot scald?

Foot scald, or interdigital dermatitis, is an inflammation between the toes caused by the microorganism *Fusobacterium necrophorum* which is normally present in ruminant feces and is always present on grazed pastures. Foot scald affects both goats and sheep. Foot scald occurs most often during persistent rainy weather or heavy dew such as early spring because of persistent moisture on the skin between the toes.

What are the symptoms of foot scald?

The first signs of foot scald are limping and (or) holding limbs off the ground. Foot scald is characterized by inflammation of the skin between the toes. The skin appears pink to white in color, moist, raw, and very sensitive to the touch. Affected animals need to be treated, because foot scald often can be followed by foot rot.

At the NCSU Meat Goat Research and Educational Unit, cases of foot scald are mostly observed in early spring while nursing does and their suckling kids are control-grazed on pastures. Young kids are very susceptible, but does will also be affected. Under wet conditions, cases of foot scald have also been observed in summer and fall.

How to treat animals which have foot scald?

Individual cases of foot scald can be treated topically using solutions of copper sulfate or zinc sulfate (see products below) by squirting the solution between the affected toes. If the animals are on pasture, treating them after the dew is gone on clear days will allow the solution to dry on the hooves and feet, thus improving its effectiveness. During periods of persistent rainy weather, affected animals should be treated once or twice a day, depending on the severity of the case. Hooves heal rapidly after 1 or 2 days of twice a day treatment, but can recur easily if wet conditions persist.
What products are available to treat foot scald?

15% copper sulfate crystals (CuSO4) from Tractor Supply
http://www.tractorsupply.com
-15 lb container costs $69.99
4 used to get rid of algae in ponds
6 ounces (170 g) CuSO4 crystals + 1 quart of water
 élect sit overnight for crystals to dissolve
4squirt solution on affected areas

Dr. Naylor Hoof ‘n Heel from Register’s Sheep & Goat Supply
http://goatsupplies.netfirms.com/
-1 gallon costs ~ $23.00
11.2% zinc sulfate solution already prepared
4squirt solution on affected areas

Liquid Zinc Sulfate (Premier FootCare) from Premier1
http://www.premier1supplies.com/
-1qt costs $23.00, 1 gal costs $41.00
4 mix 1 part Premier FootCare with 3 parts water
4squirt solution on affected areas

The use of brand names in this publication does not imply endorsement of the products or services named or criticism of similar ones not mentioned.

IS MAX Q FOR YOU?

Adapted from an article by Carl S. Hoveland and Mark A. McCann, University of Georgia, Athens, Virginia Cooperative Extension. Submitted by Eve H. Honeycutt, Livestock Agent, Lenoir and Greene Counties.

What is Max Q?
Max Q is the name that was trademarked by Pennington Seed for the purpose of non-toxic tall fescue. This non-toxic endophyte was inserted into tall fescue to furnish excellent animal performance of endophyte-free tall fescue varieties. But it also has the hardness and stand persistence of toxic endophyte-infected varieties.

Is there a difference in animal performance on grazing trials?
Beef steers grazed on Max Q fescue had average gains of 2.6 lb/day as compared to 1.7 lb/day on toxic endophyte-infected varieties. When repeated for the grazing period of October to December, Max Q furnished average daily gains similar to endophyte-free (2.7 lb/ day) and much better than endophyte-infected (1.9 lb/day). Again, there were never any signs of fescue toxicity symptoms with Max Q tall fescue.

How hardy is Max Q?
In the harshest testing conditions in Georgia being under close continuous grazing throughout two years of drought, endophyte-free tall fescue deteriorated quickly while Max Q survived as well as the toxic infected variety.

Should you plant Max Q?
Max Q is not for everyone. It is suggested for the professional livestock producer. It is currently only recommended for cattle and sheep until safety trials are completed with horses. Broadcasting clover seed on your endophyte-infected tall fescue pastures is still a cheaper and easier way to improve cattle performance although it is less dependable and will not match the higher production potential of Max Q.

How to plant Max Q?
It can be planted from September to early November on a firm, well-prepared seed-bed at a seeding rate of 20 lb/acre. To change regular tall fescue to Max Q fescue requires a lot of work. Plant in the spring of the planting year and keep it closely grazed, apply fertilizer and lime along with herbicide for existing tall fescue. During the summer just allow grazing or harvest for hay. In the fall apply herbicide and then recommended fertilizer. Plant Max Q by no-till drill at 25 lbs./acre between early September and late November. In the following winter and spring don’t allow grazing until 8 inches tall and apply fertilizer in late February. In the summer allow light grazing or let the seedling pasture stand. In fall and winter perform a soils test then apply needed fertilizer in September and allow grazing.
Farmers should plan ahead what they will do if they should have an emergency where disposal of many dead animals is necessary. This article will discuss the North Carolina Laws for animal burial.

North Carolina General Statute 106-403 (NCGS) Disposition of dead domesticated animals states that it is the responsibility of the owner or person in charge of their domesticated animals to bury dead animals appropriately within 24 hours after knowledge of the death. The NC Department of Agriculture - Veterinary Division is the lead state agency to oversee animal disposal as regulated under existing rules.

The State Health Director and by extension the Local Health Director in each county is charged with preventing health risks and disease and promoting a safe and healthful environment. The Environmental Management Commission established groundwater quality standards that may not be exceeded without a permit issued under the authority of the Commission. The Groundwater Section of the Division of Water Quality is responsible for the administration and enforcement of these rules. There are many types of emergencies that would require burial. The following guidelines focus on the most common causes - flooding and electrical outages. For example, guidelines for managing dead during a foreign animal disease may differ and would be managed through the State Veterinarian.

These guidelines are intended to address dead animal disposal during a declared emergency and therefore do not take the place of the dead animal disposal that occurs under the normal permitted operation of a farm. Each farm operation shall make specific plans for animal disposal in the event of an emergency. When burial is determined to be the disposal method of choice, an attempt should be made first to bury the dead animals on the farm according to these guidelines. If proper burial is not possible on the farm, then plans should be made for alternative sites.

* The bottom of the hole where dead animals are to be buried should be 3 feet above the seasonal high water table wherever possible and at least 12 inches above the seasonal high water table. (Farm owners may contact the local NRCS agency for assistance in determining the seasonal high water table.)

* Standing water in the hole does not preclude animal burial as long as the bottom of the hole is at least 12 inches above the seasonal high water table, not in an area of standing water, and the other conditions for proper burial are met.

* There must be at least 3 feet of soil covering any buried animal. This can be interpreted to mean soil mounded over the animals above the adjacent ground level.

* The burial site must be at least 300 feet from any existing stream, public body of water, or any existing public water supply well.

* The burial site must be at least 100 feet from any other type of existing well.

* The burial site cannot include any portion of a waste lagoon or lagoon wall.

* In the case where the burial site is in a waste disposal spray field, the burial site is not available for subsequent waste spraying until a new viable crop is established on the site.

* The burial site shall be located so as to minimize the effect of stormwater runoff.

* Burial is not permitted in the tiled area of an underdrained field.

* A record of the location of the approved site (GPS latitude and longitude coordinates), the burial history of each burial site to include the date, species, head count and age must be kept by the owner and reported to the Local Health Director who will in turn report this information to DENR Division of Water Quality, Groundwater Section.

Farm owners and operators are encouraged to consider measures that could be taken prior to an imminent emergency that could reduce the impact...
on the farm and the environment. NRCS is available to evaluate soil survey information and aerial photos to assist in locating a good burial site. Meeting the burial guidelines can be difficult in Onslow County due to the shallow water table in many areas. In high water table areas, the farmer may choose to bury the animal near or at the ground surface and cover the animal with 3 feet of fill material. This may not be feasible due to accessibility of borrow material, unsightliness, and the newly created limitation to the use of the land where the animal is buried.

Emily A. Walton – Livestock Agent, Onslow County

Compiled from “Caring for the Beef Bull” by Dr. Jim Turner

Producers will often spend a good deal of energy on the care and nutrition of the cow herd. Unfortunately, the one animal that can contribute half of the genetic potential within a beef herd is sometimes forgotten…. the bull! A single bull can impact as many as 15 to 40 females in an average breeding season while a single cow usually only impacts a single calf. Proper bull selection and care can impact your herd for many years down the road even after that bull is no longer useful in your herd.

Because two-year old bulls can be costly, many producers turn to yearling bulls to serve as herd sires in their operations. The yearlings can allow cattlemen to improve the genetics in their herd quicker but will also require more intense management than older bulls since they are still growing. Poor management may lead to lower reproductive efficiency and may limit how much that bull can contribute to the genetic improvement of the herd.

Yearling bulls should weigh no less than 1100 pounds at 13 to 15 months of age. If the bull was purchased from a performance feed test, he may be carrying extra condition. At the beginning of the pre-breeding period, the bull needs to be body condition scored. Any that are carrying too much condition need to be slowly brought back down to a BCS of 6. This can be done by feeding a similar diet as what they had been fed, but by reducing their intake by about 35%. Grain can be reduced by 10% each week until you reach the desired level. You should still allow the young bulls to gain 2 pounds per day during this period of time. Feed a ration of 11-12% protein and 70% TDN on a dry matter basis. This can be accomplished by feeding ½ to 1 pound of grain per 100lbs body weight in addition to free choice medium quality hay or excellent pasture.

Before the breeding season, a young bull should be pastured in at least a one acre lot to allow for plenty of exercise. The water and feeder should be placed on opposite ends of the lot to encourage the bull to exercise. The bull will need to build stamina for the breeding season.

How the herd is managed will play a big role in the bull to female ratio during the breeding season. A good rule of thumb is to allow 1 cow per month of age of the bull up to 3 years of age. So a bull that is 2 years old (24 months) could be run with 24 cows. A yearling bull should never be run with the entire cow herd because he’ll lose too much condition and will only impregnate a small percentage of the cows. When running multiple sires, keeps bulls together that are the same size and age. Older, larger bulls may prevent a younger, smaller bull from breeding the cows. This could be a problem if the older bull is less fertile or has a lower genetic value than the younger bull. Fighting and dominance issues can be avoided by using bulls of the same size and age.

Because they are still growing, younger bulls should be given supplemental feed during the breeding season. Feed them ½ pound of grain per 100 pounds of body weight to help maintain body condition.

After the breeding season, separate bulls into three groups. One group will be mature bulls that don’t require special care. The second group will be young bulls or those bulls that are extremely thin. The third group will be bulls that are old, crippled, or have completed their reproductive life. Body score the bulls at the end of the breeding season and formulate their diets so that they will be of moderate condition (BCS of 6) at the beginning of the next breeding season. Young bulls should be 65-77% of their mature size by the beginning of the next breeding season and should be fed to accomplish this needed gain. If they are undernourished, it may cause irreversible damage to the reproductive system.

Your bulls are a large piece of the puzzle when it comes to the quality of your beef herd.
Take extra precautions to make sure that the needs of your yearling bulls are being met so that they will perform at their best.

### Forage Management Tips

#### July
- Stick to a four to six week schedule of nitrogen applications on summer grasses. Do not delay application because of dry weather unless it has not rained at all since the previous application.
- Maintain harvesting frequency for quality hay.
- Hot, dry weather can result in nitrate poisoning of animals grazing stunted, highly fertilized summer annuals.
- Sample soils and apply lime on fields to be planted in the fall, if not already done.
- Decide which fescue pastures will be stockpiled for winter grazing.

#### August
- Sample soils and apply lime to pastures with pH below 5.8 to be overseeded next spring.
- Fertilize warm-season grasses.
- Fertilize fescue and keep cattle off of the pastures to be stockpiled for winter grazing.

Recommendations for the use of chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by the North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage and examine a current product label before applying any chemical. For assistance, contact an agent of the North Carolina Cooperative Extension in your county.

The use of brand names in this publication does not imply endorsement of the products or services named or criticism of similar ones not mentioned.

#### Upcoming Events

**AUGUST**

11th – 12th – Grass-fed Beef Conference – Durham

14th - 15th – Meat Goat & Sheep Roundup – Location TBA

#### SPOTLIGHT

**WATCH OUT FOR ALIEN INVADERS!**

Watch out! Alien invaders are everywhere! Some of them hitched a ride with others; some were brought here intentionally. What? Alien invasive WEEDS! Whether aquatic or terrestrial, they have cost the US billions over the years.

Why are aquatic invasive weeds of concern? Because they…

- form dense growths that impede water flow and increase flooding,
- impair water use for fishing, boating, and other activities, and
- create breeding habitat for mosquitoes and other pests.

The “big three” in eastern NC are alligatorweed, water hyacinth, and parrotfeather. **Alligatorweed** (*Alternanthera philoxeroides*) is believed to have arrived in the US sometime around 1897. It is native to South America and may have arrived in ship ballast water. The first sighting was in Alabama, but it has spread throughout the southeastern states. Attempts to control it are mainly through herbicide application.
programs, although there has been some success using the Alligatorweed fleabeetle. The plant has a clover-like flower, but does not produce seed. Propagation is through plant fragmentation. Of the three plants, this one is the most widespread in eastern NC waterways and ditches. It even manages to grow on land, and has invaded farm fields; likely transported with the soil when ditches are cleaned out. The state has a cost-share program to help counties and municipalities control the plant.

**Water hyacinth** (*Eichhornia crassipes*) is a very attractive plant; however, one plant can quickly become thousands. In fact, its beauty is one way that it gets spread. People purchase a plant for their water garden; then, when they get too many plants, they decide to “give some a good home” in a local pond. The plant then takes over. The Brazil native was first introduced to the US as an ornamental aquatic plant at a New Orleans, LA exposition in 1884. It escaped from cultivation and reached Florida by 1890. It is illegal to own or possess the plant in Texas, and carries a hefty fine. It can still be bought and sold in North Carolina. Water hyacinth propagates through both fragmentation and seed formation. Some is found in local waterways, but it is most problematic in ponds.

**Parrotfeather** (*Myriophyllum aquaticum*) is another attractive plant that people purchase for their aquarium or pond. The plant then “escapes” (birds, flooding, improper plant disposal) to local ponds and waterways. As with the other two plants, it came from South America around 1890. It has spread throughout the southern states and up both coasts. There are several local waterways with small populations of this plant. The parrotfeather is also sprayed, if found during herbicide application to control alligatorweed.

Please help control the spread of these plants and other invasive species. One state came up with a catchy tune to remind boaters of how to help:

“The Ballad of Aquatic Invasive Species”
http://www.uwex.edu/erc/music/song_ballad_of_aquatic.html

If you have any questions about these and other invasive plants, please contact your local NC Cooperative Extension office.

Diana M.C. Rashash, PhD
Extension Area Specialized Agent
Natural Resources-Environmental Education