

Goat Producer's Newsletter

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Buying Low and Selling High!

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More producers are generating extra income through slaughter kid programs. Many producers purchasing goats by the head, feed them for 60 to 90 days and sell by the pound. Suffice it to say, it would be an ideal world if all these kids were purchased off farms, but in the real world you will find the type of goat that can, "make money

" is often what you find at a stockyard. These goats are lightweight, weighing 30 to 35 lbs; thin; just weaned; incredibly stressed; and are subject to any number of disease problems.

Once goats are received at the farm,

1. keep them isolated from the resident herd. It is always best not to commingle the animals at any time during the feeding period.
2. Provide goats with fresh water and free access to high-quality hay. Let them cool out for 24 hours.
3. On day two, treat all goats with a coccidia control compound for the next five days using products such as Corid (Amprolium) or Albon (Sulfadimethoxine).
4. On day two, move the animals through the chute as quietly as possible. Vaccinate each animal with Tetanus toxoid and Clostridium perfringens C&D.
5. Goats may come onto the farm carrying external as well as internal parasites. Treat each animal for lice, as in a pour-on treat and deworm each goat with an effect deworming product (See page 4 and 5).

6. It is a good idea to take temperatures. Any goat with a temperature 103^o F should be treated with a long-lasting antibiotic. In addition to elevated temperature, note nasal discharge and cloudy eyes. These are indicators of stress-related bacterial infections, such as Pasteurella, that is likely to progress into pneumonia. Goats with elevated temperatures and signs of disease should be penned together, and eliminate nose-to-nose contact between sick and health animals.

Research has shown that as the diseases progresses in stressed animals, the bacterial becomes virulent and can then infect health animals.

7. By the second day all goats should go on feed, allowing 12 inches of bunk space per head and allow 25 square feet per head lofting space 5 ft. x 5 ft). These areas and good barn ventilation are essential to good respiratory health.

There are many possible feeding programs out there. However, we have seen that high-fiber rations are ideal for goats in feeding programs. First, at least ½ of the daily intake should be hay. If the cost of hay is prohibitive, substitute soybean hulls for at least one half of the hay needs. The concentrate portion of the diet should be at least 15 to 16 % protein and a TDN of 70%. The total diet (hay + concentrate) should have an approximant protein level of 12-14%, TDN 55%, ADF of 35 and NDF of 55. This is a high fiber feed, yet the fiber is quite digestible. In addition to the feeding program, a good mineral

product should be fed as a free-choice or as a supplement to the concentrate portion.

Concentrates should be hand fed either once or twice daily. Hand-feeding is preferred over self-feeding. Hog feeders work well for hogs, but not for goats!

Hand feeding has shown to yield 4.5 lbs of feed to 1 lb of gain, compared to 6-8 lbs of feed to 1 lb of gain. For additional information on goat feed programs, please contact *Terry Hutchens, University of Kentucky, Animal and Food Sciences Department, thutchen@uky.edu, 859-257-2465*

Update: on UK Goat Mineral Recommendations

John T. Johns, Donna A. Phillips,
Terry K. Hutchens,
Animal and Food Sciences Department, University of Kentucky

Suggestions for mineral formulations for does in various stages of lactation and growing kids have been recently released from the University of Kentucky. These suggestions were based on our estimates of requirements determined from a review of recent scientific literature. This was done because the last National Research Council (NRC) publication on nutrient requirements of goats was published over 25 years ago and is not reflective of current goat production.

A review of these formulation suggestions by the industry has shown us that minor revisions are necessary to accommodate ease of mixing. We have also just learned that a new goat nutrient requirement publication from the NRC will go to the printer by December 29. This means the new publication will be in the public domain early next year. Because of these factors, we have decided to delay revision of our formulation suggestions until we have been able to review the new NRC publication. Therefore, we suggest that producers not use the formulations recently released and wait for our revisions which will be available, in the early part of 2007.



Kidding Season Preparation and Kid Care

By: Ken Andries, Ph.D.
Kentucky State University

As fall starts, many producers are beginning to get ready for kidding season. This is a very important season for all producers because it is the start of the next generation of breeding animals and the source of income from our animals, as well. However, it is a very stressful time for year of producers and animals alike for the same reason. Some basic care, preparation, and planning can help remove the stress and improve your success rates.

The first thing is to make sure the does are being feed properly for their stage of production. This helps prevent pregnancy toxemia and ensures good-quality colostrum for the new-born kids. This is one of those times that some feed is called for because the doe has a reduced capacity to consume forage, making it difficult for her to consume enough forage to meet her needs. It is very difficult to recommend a standard supplementation because it will depend on the protein and energy levels of your forage and supplement. However, one half to a pound of a 14 to 18% protein supplement will generally meet the animals' needs when good-quality forage is available. Please remember that even with high-quality forages it is a volume issue, not a quality issue, that can cause problems.

The second thing to help prevent problems is to make sure your does are healthy going into kidding. To ensure this, it is a good idea to start working your animals about a month before kidding is expected to begin. At this time you should booster the CDT vaccination on your animals and deworm all that need it. You should also check and trim feet and if you have a history of foot problems you may want to put the animals through a foot bath.

You also need to make sure you have a good-quality mineral mix available for your animals at all times. However, it is critical at breeding and kidding to ensure good mineral nutrition. Selenium needs to be in your mineral mix and available to your animal. If you have had problems with weak kids or retained placentas in the past, you may want to give your does a shot of Selenium a month before kidding is to start. This will boost her levels and helps her pass some on to her kids.

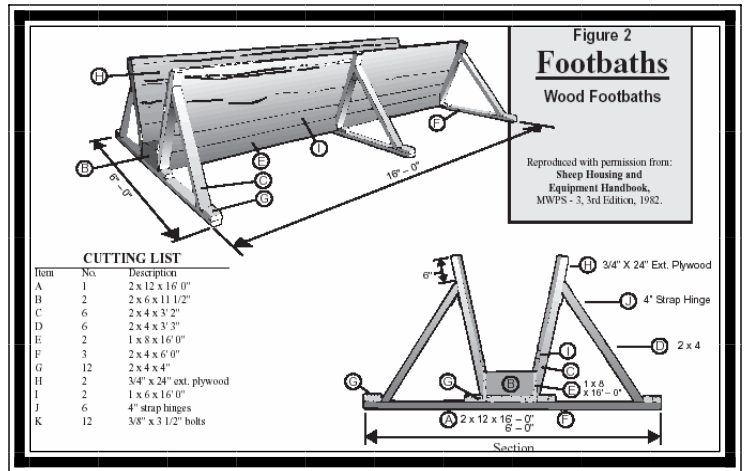
Finally, you should review the stages of labor and information on how to assist at birth. Then check your kidding kit to make sure you have all the supplies you will need. This should include tags, record sheet, scale, iodine, feeding tube, nipples, kidding snare, latex gloves, milk or replacer, colostrum, drench product for pregnancy ketosis and weak kids, and selenium shot. You should also make sure you have your kidding area ready, and clean the barn if it is to be used for kidding.

After a doe kids, you need to make sure the doe and kid(s) bond. This is generally accomplished by allowing the doe to clean and dry the kid(s). After this, you need to take a birth weight, tag the kid, and record the birth date, type, and sex, as well as dam and weight of the kid. Dip or spray the navel with iodine, give the kid an injection of selenium to prevent white muscle disease, and, finally, make sure the doe has milk.

The next step is to deworm the doe if you did not do so before kidding. As a precaution, deworm again at this time. We know that there is a spike in egg production at kidding so deworming shortly before or at kidding helps reduce the number of eggs on pasture

and exposure of the kids early in life. Make sure the kid nurses and is doing well before you turn everyone out on pasture.

Finally, be sure to clean all your equipment and sanitize things as best you can between animals. This will help prevent disease and infection from spreading in your herd. Good luck with kidding, and I hope everyone has a 200% kid crop and all kids live to weaning.



Footbath plans are available from your County Extension office.



A footbath that makes them stand until they are finished with the treatment.
Watts Farm

Goat Health Management Tips

Patty Scharko, DVM, MPH
University of Kentucky, Extension Ruminant Veterinarian

Normal: Temperature 101.5 - 103°F
Respiratory rate 10-30 breaths/min (kids- 20-40 breaths/min)

Routine Procedures

Trim feet every 4-6 months; depending on housing & environment

Castration Beware of tetanus- vaccinate doe & kids described below; count 2 if band

Vaccination Follow manufacturer's instructions; use 3/4 to 1 inch 18-20 gauge needle
Prefer subcutaneous (SQ) method if label directions permit; tent skin for SQ.
SQ in neck area in meat goats, behind elbow in breeders/show goats
Tetanus toxoid & Clostridium perfringens C&D (overeating disease)

Initial dose >1 month of age

Immunize 3-4 weeks later

Yearly booster To pregnant does 30 days before kidding

Goat vaccines: Bar Vac CD/T (Boehringer Ingelheim), Essential 3+T (Colorado Serum Co.),
Vision CD/T (Intervet)

Sheep/cattle vaccine: Covexin 8 (Schering Plough)

Deworming **PERMANENT PASTURES PROMOTE PARASITES- promote browsing**

POINTS Pasture rotation important- at least 3 times each year; EVERY 3 days best.

Do not graze grass below 4 inches.

Parasite resistance exists to many dewormers, especially Ivomec

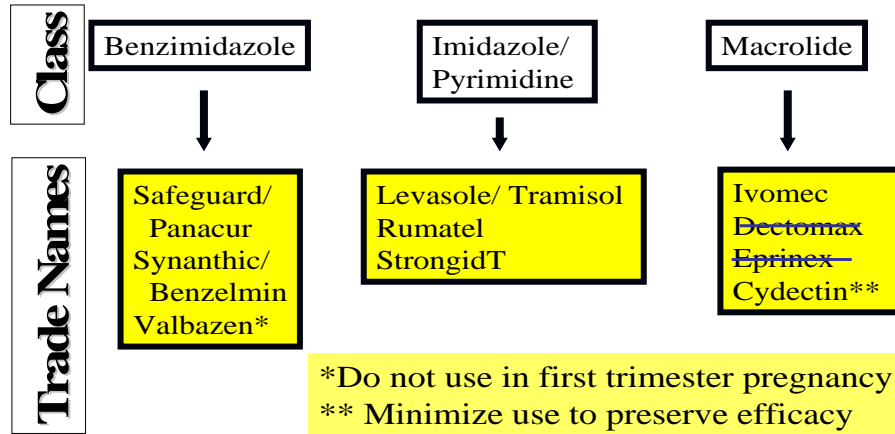
Fecal Egg Counts (FEC) help monitor parasites- FEC at deworming & repeat FEC in 14 days (need controls for FEC reduction test.)

Beware of diatomaceous earth- does not effectively deworm

Need 1.5-2 times higher dose than cattle/sheep oral products; do NOT underdose.
Caution with levamisol. Do not use injectable formulation in goats.

Choose one product & use for at least one year; if suspect dewormer resistance,
do FEC reduction test and change to a different class of drug

Classes of Dewormers



Deworming Tips

- Select parasite-resistant goats- FAMACHA and FEC (Fecal Egg Count)
- ISOLATE new additions on dry lot for 3 weeks; dry lot & NO access to grass.
- Deworm simultaneously on arrival with anthelmintic from each of the 3 classes;
- Do Fecal Egg County (FEC) 14 days later- can enter herd if negative.
- FAST- improves efficacy of some oral dewormers. Hold in dry lot or feed only dry hay for 12-24 hours before and 8-12 hours later. (Ad lib water)
- Avoid “salvage” deworming- showing signs (bottle jaw)

Strategic Deworming Method

- Deworm 30 days before kidding
- Follow with 2 to 4 more dewormings at 3 week intervals
- Treat kids at weaning and utilize “safe” pastures {hay pasture, new pasture, not grazed for 3 months (spring) or 6 months (fall), grazed by cattle/horses}

Summer Tactical Deworming – remove parasites from goats before the worms contaminate pasture

- Examples: Treat goats 10-14 days after rain, especially during a drought
- High fecal egg counts in spring (500 eggs per gram) or fall (1,000 EPG)

FAMACHA® “Smart drenching”; selective treatment based on pale eye color in the summer. System does not treat all goats; promotes identifying those that are resilient to internal worms.

DISEASES

Lice control; cattle pour-on’s (example- Ivomec) as pour-on will get lice but NOT internal worms!

Coccidia- associated with stress and over-crowding

- Prevention: Rumensin Beware in horses
- Bovatec* Beware in horses * **Extralabel in goats**
- Deccox
- Treatment: Corid (amprolium)* * **Extralabel in goats**
- Sulfamethazine, sulfadimethoxine* * **Extralabel in goats**

Meningeal worm (*Parelaphostrongylus tenuis*) from white tail deer; goat weak in rear legs.

Lungworms Occur in Kentucky

PNEUMONIA Do NOT use Micotil in goats. ILLEGAL to use Baytril in goats.
 Improve ventilation (best to keep on pasture, out of barn)
 Isolate new arrivals for 2-4 weeks; do not share waterers with herd

Enterotoxemia/ over-eating disease Prevent with vaccination

White muscle disease = selenium deficiency; use good mineral; may need to inject

Polioencephalomalacia Blindness/ seizure; B1 (thiamine) vitamin deficiency

Listeria “Circling disease”; prompt treatment with antibiotics

Caseous Lymphadenitis “Contagious abscess”, “cheesy gland”; isolate goat; consider vaccinating with Case-Bac or Caseous D-T (NOT labeled for goats)

Johne’s disease Wasting disease, usually no diarrhea; affected usually over 1 year of age

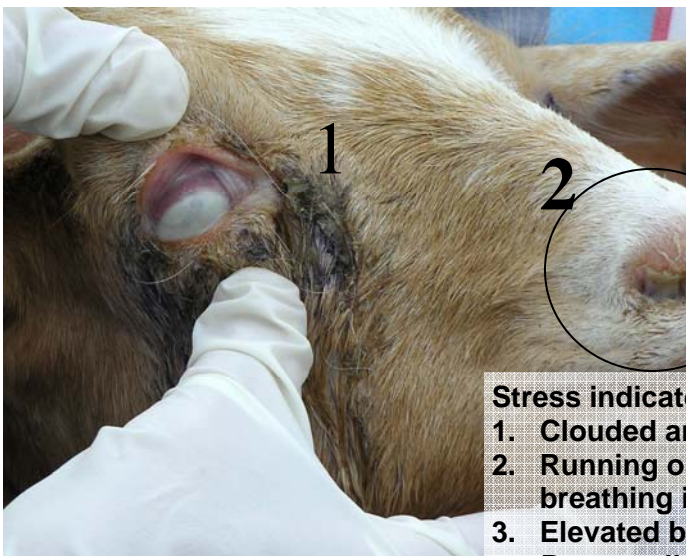
Soremouth “Orf”; wear gloves- contagious to humans

Ringworm Contagious to humans

Q Fever Bacteria *Coxiella burnetti* in placenta/fluids & milk; usually not a problem in goats; mild to serious flu symptoms in humans

Tetanus Prevent with good vaccination protocol

Late Tem Abortions Toxoplasma, Chlamydia, Campylobacter, Leptospirosis. Send to lab for dx



Pinkeye Chlamydia, Mycoplasma, or other agents; isolate; systemic and/or topical treatment with oxytetracycline

Stress indicators :

1. Clouded and weeping eyes indicating a *Moraxella* species infection.
2. Running or caked on yellow mucus, coughing and perhaps labored breathing is an indicator of *Pasteurella haemolytica*.
3. Elevated body temperature will be associated with the *Pasteurella* infection and may be the first indicator of disease onset.

Take Extra Care with Hooves in Wet Weather

By Jackie Nix

Horse folks are often fond of the saying – No hoof- no horse. Well, horses aren't the only animals in which we need to worry about hoof soundness. Hoof soundness in pastured animals is absolutely critical. Grazing goats that are lame won't venture out and forage well and thus may gain less weight or even lose weight. Breeding bucks that are lame will not travel to seek out females in heat and may lose libido all together. With the wet conditions we've been facing this summer and fall, I have had a lot of calls lately regarding hoof problems. The wet conditions that many have experienced this summer and fall make foot rot complaints common.

What Causes Foot Rot?

Foot rot is caused by an infection of anaerobic bacteria in the foot. The exact species of bacteria will differ slightly among species; however, there it has been suggested that bacteria from one species can infect another (i.e. cattle foot rot bacteria can infect sheep or goats and vice versa). Some of these bacteria are present naturally in the environment (present in manure and the soil) while others are brought in by infected animals or human-caused contamination. These bacteria can survive in the soil from 1 to 10 months and even longer within hoof tissues.

These organisms cannot penetrate, intact healthy skin and hoof tissue. Cuts, bruises, puncture wounds, or severe abrasions permit entry. Therefore, conditions that result in foot injury will predispose animals to contracting foot rot. These conditions include, but are not limited to: sharp rocks, rough frozen ground, sharp stubble, and abrasive surfaces. Injuries are more likely to occur when the tissues of the feet are swollen and soft due to continued wetness. Also, the bacteria survive better in the environment during wet conditions.

Prevention

The best prevention is to never bring contagious foot rot onto your farm in the first place. Do not purchase animals from herds that show signs of lameness. Always quarantine new animals (from any source) before introducing them into your herd. You may want to run sheep or goats through a footbath or spot treat foot rot infections with aggressive hoof trimming and topical application of zinc

sulfate solutions or other acceptable treatments. In severe cases antibiotics may be in order. Consult your local veterinarian for more information.

Also be mindful of farm-to-farm transmission by humans. This is especially important with sheep and goat operations. Insist that visitors wash their boots in a footbath of diluted Clorox or zinc sulfate solution. Many larger sheep and goat farms provide such washing stations in the parking area for visitors. Another option is to provide them with disposable boot covers or provide your own footwear. Another consideration is to not allow visitors to drive their vehicles into your pastures or driving lanes, thus transferring manure and bacteria via the tires.

Keep goat hooves properly trimmed. During routine trimming, trim animals with healthy feet first so as to not spread the bacteria within the herd. Then, as you work on infected animals, disinfect your hoof shears between animals with a Clorox solution.

Animals that display chronic foot rot symptoms should be culled, as they will act as a reservoir for the foot rot organisms for the entire herd.

Management practices that help reduce hoof damage can help to reduce the incidence of foot rot in your herd. Maintain good drainage in and around watering and feeding areas. You may also think about placing concrete pads in these areas to reduce the amount of mud. Do not utilize sharp gravel in travel lanes for livestock. During winter months, smooth out areas of rough frozen mud. Proper mineral nutrition, especially zinc, can also help to improve hoof integrity and strength and reduce the incidences of foot rot.

Role of Zinc and Copper in Hoof Integrity

Zinc is a critical nutrient involved in the maintenance of epithelial tissues. Zinc is estimated to be a component of over 200 enzymes. Zinc's role in maintaining hoof tissues includes (but is not limited to) stimulating growth of epidermal cells, production of keratin (sulfur containing protein which is the primary component of the hoof), improved wound healing and improved cellular integrity. Zinc-deficient cattle exhibit increased claw and hoof disorders as well as skin disorders and poor wound healing. Improved zinc nutrition has been shown to improve hoof integrity in deficient animals.

Copper is required for production of healthy claw horn tissue as well as antioxidant activity. Copper deficiency reduces the crosslinking of keratin, decreasing structural strength of horn tissue. Copper deficiency also results in decreased immunity, infertility and decreased growth. Marginal to deficient levels of zinc and copper are common in many soil types across the United States. Additionally, high levels of naturally occurring antagonists such as iron, molybdenum, and

sulfur are common in several areas. Both of these factors make proper trace mineral supplementation a smart investment to help insure that goats receive the levels of copper and zinc needed to express their true genetic potential. Goat producers who have observed lameness and/or other hoof problems should consider use of a goat-specific supplement product that delivers NRC-recommended levels of both copper and zinc, in addition to other trace minerals and vitamins.

In summary, incidences of foot rot increase during prolonged wet weather. There are many management practices that you can employ to reduce foot rot on your farm. Included among these is proper supplementation of zinc and copper. Many goats show deficiency symptoms including: discolored hair coats, slow to shed out of winter coats, depressed immunity, decreased conception rates, increased days open, and hoof problems. If your goats experience any of these symptoms, you should use a goat-specific supplement product by a reputable manufacturer that delivers recommended levels of copper and zinc to help goats reach their maximum genetic potential.

Jackie Nix is a goat nutritionist with Sweetlix^o (<http://www.sweetlix.com>). You can contact her at jnix@sweetlix.com or 1-800-325-1486 for questions or to learn more about the Sweetlix^o line of mineral and protein supplements for goats, cattle, horses, sheep and wildlife.



Simple environmental management installations amounting to 4 inches of rock and treated 2" x 6" boards, as shown here, are providing a clean, mud free walking surface and has greatly reduced incidence of coccidiosis on this goat farm in Virginia. Photo. and topic Courtesy of Dr. Pelzer, Extension Veterinarian, Virginia Tech, Blacksburg VA.

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