

Small Ruminant Update



Quarterly Newsletter

Vol. 1 No.3

Fall 2021

Diarrhea in Lambs & Kids

Brittany N. Diehl

Causes of Diarrhea in Neonatal Lambs and Kids

There are four major pathogens responsible for causing diarrhea during the first month of life:

* Enterotoxigenic *Escherichia coli* (ETEC)

Most commonly 1-4 days of age (always < 10 days of age).

Many lambs/kids may die before developing diarrhea

* Rotavirus

Most commonly 2-14 days of age, but older animals may be infected.

* Cryptosporidium species

Most commonly 5-10 days of age.

Zoonotic risk- Humans can be infected!

*Wear appropriate personal protective equipment.

* Salmonella species

Most commonly < 1 week of age die prior to exhibiting clinical signs, while those > 1 week of age are more likely to have diarrhea.

Zoonotic risk - humans can be infected!

*Wear appropriate personal protective equipment.

Causes of Diarrhea in Older Lambs and Kids

*The most common cause is nematode infestation.

Haemonchus contortus (Barber's pole worm)

Trichostrongylus spp.

Ostertagia spp.

Cooperia spp.

*Other causes include: *Clostridium perfringens* and Coccidiosis.

* Clostridium perfringens (types A, B, C, and D)

Type D is the most common agent in the United States.

Death often occurs within hours of the onset of clinical signs.

* Coccidiosis

Clinical signs are often amplified by weaning, cold weather, or relocation.

Can occur at any age, but disease is often more severe in younger animals.

Treatment of Lambs and Kids with Diarrhea

Specific therapies are available for some causes of diarrhea. Many animals need to be treated for dehydration and metabolic acidosis, regardless of the cause of illness.

Maintaining a relationship with your veterinarian is crucial with regard to the proper diagnosis and treatment of these cases.

Removing milk or milk replacer from the diet is not recommended.

If the lamb or kid is only mildly depressed but still wanting to nurse, they can be treated with oral electrolytes.

Electrolytes should not be mixed with milk/milk replacer, rather it should be given in separate feedings.

If the lamb or kid is too weak to stand, IV fluids are indicated.

*****Contact your veterinarian!**

Control Measures for Infectious Diarrhea

*Ensure adequate intake of high-quality colostrum and minimize stress during the neonatal period.

*A normal lamb or kid should stand and nurse within the first 45 minutes to 1 hour of birth.

*Pre-partum shearing of the dam may aid in the decreased occurrence of ingestion of feces by lambs.

*Proper sanitation is paramount in lambing and kidding areas.

*Infected animals should remain in the environment where the infection was first recognized. Then the removal of pregnant ewes or does to a clean area before lambing or kidding is best practice, in order to minimize the spread of disease.

Dr. Brittany N. Diehl is a resident at the UF Food Animal Reproduction and Medicine Service. Contact her by email: bn.diehl@ufl.edu

Alternative Enterprises for Small Ruminant Owners

Alicia Halbritter

Small ruminant production can be somewhat difficult in Florida due to access to markets for buying, selling, and harvesting animals. However, small ruminant operations can develop alternative enterprises which can help increase their net income.

Milk Soap

Have dairy goats? Sometimes it can be difficult to secure a buyer for your entire supply, or there may be another market for your products that can offer a varied source of income. Raw milk sales aimed for human consumption are illegal in the state of Florida, however raw milk can be sold under the label of animal consumption only. The production of goat's milk is often a hobby for many who may have milking goats to provide their own family with raw milk without the intention to sell. However, production may soon increase over the demands of the family so what can you do with the extra milk? There are many recipes for goat's milk soap, with a variety of different methods and ingredients utilized. Soap products are rather unregulated (except if medicinal claims are made, which are regulated by the FDA) and therefore easier to sell than consumable products like milk or dairy products. This specialty product has increased the income or helped hobbyist "break-even", however it does come with some labor as you must craft the soap yourself. Explore this opportunity if you are looking at another avenue to make an income with dairy goats besides selling fresh milk!



Brush Clearing

Small ruminants, particularly goats, are great browsers. These species enjoy a variety of plants and can eat many nuisance plants like poison ivy without ill effect. Some operations with dry dairy goats, young meat goats, breeding herds, or other "seasonal" herds have found success in offering livestock brush clearing services. Businesses that offer such a service will generally transport the necessary number of animals to the location, set up appropriate barriers/fences, manage the watering system and any additional feed needs, and of course remove any materials

and animals once the job is completed. A heavily stocked area can be cleared of brush rather quickly with the use of goats. This method is especially successful in areas where equipment would have a hard time accessing or equipment use may cause environmental damage. If your herd has an "off-season", consider offering this service to generate an extra income with little additional inputs on your behalf.



"Goat Yoga"

Have you seen the new 'craze' of goat yoga? This activity is typically done with goat kids, but does, or sheep ewes & lambs could be incorporated as well. This alternative enterprise is an option for a small ruminant owner to partner with a yoga facility or host a yoga class on your farm if that is an option for you. A partnership with another facility that covers the yoga or meditation portion allows you to bring in animals that you already own for participants to enjoy while they engage in the program. This business opportunity comes at almost no additional cost to you except for transportation or insurance needs; however, these are typically minimal with the right partnership! A business owner thinking about this venture should look at their kidding/lambing season to determine when babies will be available for classes or if additional kids/lambs can be had throughout the year in order to provide classes with young animals all year round.



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Pregnancy Diagnosis in Small Ruminants

Catalina Cabrera

There are multiple managerial benefits associated with knowing if your does/ewes are pregnant as early as possible. For instance, you can plan accordingly and re-breed those that are open, sell a confirmed pregnant animal, or sell those that did not get pregnant. Also, depending on your diagnostic method used, you may be able to find out if it is a single or a multiple pregnancy and feed them accordingly to prevent pregnancy toxemia. Likewise, you could potentially find out more accurately when your lambs/kids will be on the ground which will allow you to be prepared.

Diagnostic methods:

The decision on what method to use should be based on what works better for you depends on your location, your animals, your access to supplies, veterinarians, etc. Regardless, is always good to have good records, it is also helpful to have identification tags, names, or collars that allow you to record individual information. Here you will find common methods with a focus on those that are more accurate. The advantages and disadvantages of each method are listed to guide you in deciding which method works better for you.

Clinical signs of pregnancy:

This method is the more traditional and is based on observation of signs associated with pregnancy. Usually, it can detect pregnancy when is very advanced and does not provide an accurate breeding time.

*Absence of heat: A pregnant female should not display signs of heat and is likely that in the presence of a male she will not allow him to mount her. In fact, he may not be interested. Keep in mind that some dominant males could still attempt to mount, even if the female is not in heat. Also, there are other reasons why a female will not show heat, for example anestrous, pseudopregnancy and ovarian cysts.

*Udder development: As pregnancy advances, females will start to develop the udder and in late pregnancy it will look full, edematous and the teats will be also slightly enlarged. The issue with this method is that it will not be obvious until the pregnancy is very advanced and pseudopregnancy can lead to enlarge udder in the absence of pregnancy.

*Increased abdominal size: When the pregnancy is advanced, the large size of the fetus/es and fluids inside the uterus can make the abdomen of the female appear enlarged or distended. Keep in mind that some breeds, more than others, can have an enlarged abdomen that is not associated with pregnancy. Bloated animals or animals in a high plane of nutrition may lead you to the wrong diagnosis.

Ballottement:

With some practice, producers could learn to ballot their females to diagnose pregnancy. the methods consist of “hugging” the ewe/doe’ abdomen from the top and gently swinging or lifting the abdomen. The idea is that large fetuses would bounce back to your hand and you will be able to feel them. It requires experience, it can be uncomfortable for the female, and works only in advanced pregnancies (>100days). You could easily miss the fetus/es or call her pregnant when you may have just felt something different than a fetus.

PSPB (pregnancy-specific protein “b”):

This protein is produced by the placenta and therefore is a good indication of pregnancy. A commercial service, bioPRYN®, is available in the United States and allows you to take the blood samples from your animals and send them to one of several laboratories where they will run the test and send you results a few days later. Some facts about this test:

- *You will need to draw blood from your animals and be ready to mail the samples
- *bioPRYN will detect pregnancy after 30 days post-AI or last exposure to the male.
- *Don’t use on females that gave birth or aborted less than 70 days earlier as a positive test could be the result of circulating protein from the previous pregnancy.
- *The test will not give you an idea of how far along the animal is pregnant
- *It does not evaluate the viability of the fetus/es. Therefore, a female with a dead or mummified fetus or that has aborted will be diagnosed as pregnant
- *You will have to wait for your results before you can make a management decision about selling or rebreeding
- *You can use the value in the result to give yourself an idea of whether there is a single or multiples fetuses.
- *For more information visit their website: <https://biopryn.com/biopryn-sheepgoat/>



Ultrasound:

This method has been used now for several decades. Ultrasounds continue to improve in the quality of the image but even the most basic ultrasound can detect pregnancies. The principle for this method relies on ultrasonic waves that travel to the abdomen of your females and return to the screen as an image. This image allows us to distinguish fluid from tissues and because is real-time also allows us to move to the best views and see movements. The noninvasive and more common way to use the ultrasound is transabdominal in the right side. Very accurate with no false positives. Facts about ultrasound:

- *Pregnancy can be detected starting at day 28 from last exposure to the male or AI

- *In early pregnancies (30-45 days) you can accurately count the number of fetuses

- *You can also evaluate the viability of the pregnancy by observing the quality of the fluid, the fetal activity, and the heartbeat

- *Also, the length of the pregnancy can be estimated with fair accuracy

- *The equipment is expensive, and you required training to use it and interpret the images therefore you have to call a veterinarian that has the equipment and can ultrasound your females efficiently (~2 minutes per animal)

- *During ultrasound, certain pathologies can be detected, and treatment assessed. For example, pseudopregnancy or the presence of dead fetus/es.



Dr. Catalina Cabrera is a Clinical Assistant Professor of Food Animal Reproduction and Medicine- Small Ruminant Extension Specialist at the College of Veterinary Medicine. Contact her by email at: lcabrerarocha@ufl.edu

Thinking about provide education, expand your customer base and increase your market opportunities? “Farm to Table” Tours Are a Great Idea!

Izabella Toledo

“Farm to Table” tours are a modern-day fieldtrip to meet farmers and learn how they take care of their animals, produce animal products and care for the land and environment.

When consumers experience an educational tour on an operating farm, they may get the chance to reassess their opinion and increase their trust in how farmers care for their animals and the environment. This is especially true for those who have concerns about how the food that they consume is produced in modern farms, or for those that are willing to diversify their food choices.

By having farm tours, farmers provide the general public with a unique experience. The opportunity to openly walk on a farm and talk to farmers helps consumers learn for themselves how farms operate and the steps that farmers take in caring for animals. This type of unique field trip experience helps the general public better understand how food is produced and provides a transparent look at modern agriculture.

So, if you are a farmer, invite your friends and customers and have a “Farm to Table” day tour! Have your products available for sale, answer any questions visitors may have, provide milking and other management practices demonstrations and give people the opportunity to meet and interact with the animals!

It will be a fun day of learning, an opportunity to develop a closer relationship with existing customers, and a great way to expand and diversify your clientele to increase your market opportunities!



Dr. Izabella Toledo is the Dairy Regional Specialized Agent of the Northeast District and Editor of the Small Ruminant Update Newsletter. Contact her at (352) 284-9395 or by email: izatol@ufl.edu

UPCOMING EVENTS



October 2, 2021 University of Florida Ram Test Sale

We are excited to announce the inaugural UF Ram Test Sale!

The **UF Ram Test & Sale** is designed to evaluate rams for growth performance and parasite resistance under standardized environmental conditions. Our goal is to provide a source of high-quality, performance tested rams, with proven parasite resistance. This year, we received 41 consignments to the Ram Test, and we will be offering the highest performing individuals for your consideration at live auction on October 2, 2021. Please join us for educational programs, lunch, and fellowship prior to the sale. We hope to see you there!

- Animals will be available for viewing at **8:00am**.
- Extension programming and lunch provided.
- Rams will be available for sale at **1:00pm**.

Sale Location:
UF Beef Teaching Unit South
3721 SW 23rd St.
Gainesville, FL 32608

For full program details visit our website: animal.ufl.edu/smallruminant/ramtest

Contact Jesse Savell with any questions:
sanspur@ufl.edu (352)494-3397



Ram Test Sale Agenda

8 AM:	Animals Available for Viewing
10 AM:	Dr. John Arthington; Chair Department of Animal Sciences
10:30 AM:	Dr. Brittany Diehl; Overview of Data
11 AM:	Dr. Diwakar Vyas; Nutrition Talk
11:30 AM:	Dr. Catalina Cabrera; The importance of male selection to improve your herd
12 PM:	Lunch provided
1 PM:	Live auction begins

UF/IFAS EXTENSION
SMALL RUMINANT WORKSHOP

Saturday, Oct. 23rd
8:30am - 2:00pm



HEAR FROM THE EXPERTS!



Dr. Diwakar Vyas

Dr. Vyas, assistant professor at the UF Animal Sciences Department, will share his expertise and research in small ruminant nutrition.

Dr. Catalina Cabrera

Dr. Cabrera, clinical assistant professor at UF, will demonstrate ultrasounds and discuss small ruminant reproduction.



Dr. Saskia Hendrickx

Dr. Hendrickx is the deputy director of the Feed the Future Innovation Lab for Livestock Systems within UF/IFAS. She is joining us to discuss the contribution of small ruminants to food security.

TICKETS:

- \$20** Early Registration (before Oct. 16th)
- \$5** Kids (under 18)
- \$50** Late Registration (at the door)

LUNCH INCLUDED!

At the UF Beef Teaching Unit South
3721 SW 23rd St.
Gainesville, FL 32608



REGISTER:

<https://www.eventbrite.com/e/2021-small-ruminant-workshop-tickets-167460355431>



Contact Dr. Izabella Toledo with any questions at izatola@ufl.edu or (386) 294-1279.

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SMALL RUMINANT CONNECTIONS

Wednesday, Nov. 3rd

Nutrition Meeting

6:00 - 8:00pm

at the Baker County Extension Office
1025 W Macclenny Ave,
Macclenny, FL 32063



Meet with experts, extension agents, and fellow sheep and goat producers to discuss topics in small ruminant nutrition
FOR FREE!



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The UF Small Ruminant Update Newsletter is published quarterly by the IFAS/ UF Extension, as an educational and informational service. Please address any questions to Izabella Toledo, the Dairy Regional Specialized Agent of the Northeast District and Editor of the Small Ruminant Update Newsletter. E-mail: izatol@ufl.edu
For the latest on small ruminants and to have access to previous newsletters, please visit the UF Small Ruminant Website: <https://animal.ifas.ufl.edu/smallruminant/>



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