



ANDDA

AMERICAN NIGERIAN DWARF DAIRY ASSOCIATION

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Understanding Annual Herd Disease Surveillance in Dairy Goats

By Clare M. Staveley, DVM—[Curbstone Valley Farm](#)

Routine disease diagnostic testing is an important part of establishing, and maintaining, a healthy dairy goat herd. Whether building a disease negative herd from its foundation, or as part of a disease eradication program within an existing herd, screening for the major caprine infectious diseases can help to guide herd management decisions.

The core chronic infectious diseases of concern in goats are Caprine Arthritis Encephalitis Virus (CAEV), Caseous Lymphadenitis (CL), and Johne's Disease (MAP). There is no effective vaccine to prevent these diseases in ruminants, and infection is frequently associated with chronic, debilitating, and potentially terminal, disease. Infected goats can present with a wide range of clinical signs, and in some cases become silent carriers of disease. Routine testing may be necessary to identify those individuals within a herd, but it is also important to understand the limitations of testing.

To assure the most accurate test results, diagnostic samples should be submitted to an accredited laboratory. There are many private non-accredited testing facilities in the United States, and some may be using non-standard testing procedures and protocols, which may result in a higher incidence of inaccurate results. More about the value of using accredited testing laboratories can be found at the American Association of Veterinary Laboratory Diagnosticians (AAVLD) website, [here](#).

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ANDDA YOUTH AMBASSADORS

Congratulations to our inaugural Youth Ambassadors, representing ANDDA for the 2020-2021 year.

EASTERN

- Savannah Carman, Eastern
- Cade Cockburn, Eastern
- Emily Kern, Eastern

WESTERN

- Paul Goodchild, Western
- Makenzie Moon, Western
- Baylee Newberry, Western
- Macoyia Stoneking, Western

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Dairy Club Meeting Topic

By Paul Goodchild, [OK Doe K Dairy](#), Western Youth Ambassador

August is when I think about 4-H goals for the upcoming year. What makes a good goal and how do you know if you are successful? Goals should be more than “winning.”

Good goals are measurable and have three parts:

1. Action—how will you do something?
2. Results—what are you going to do?
3. Timetable—when are you going to do it?

Good goals also pass a “control test.” Do you have control over the outcome of the goal... or does someone else have control? Take showmanship as an example. A goal you control would be “I want to enter two different showmanship classes or workshops this year.” The goal of “I want to win a showmanship class” is not something which you have control over.

In my dairy project, I choose a management goal, a milk product goal, and a new hobby or activity goal. This past year I learned about artificial insemination, learned to make truffles, and entered a Range and Pastureland contest.

What are some goals you want to accomplish this year?

	ACTION	RESULT	TIMETABLE
I want	To perform	AI	By spring breeding season
I want	To make	Lotion	For Christmas presents
I want	To enter	Public Speaking	In District 4-H

How to Blood Test Goats

Manning and Stratton Puska, [Red House Dairy Goats](#)

Raising healthy goats takes a lot of time, energy, and knowledge. Knowing how and what to feed your goats, what type of housing to provide them, how to keep them safe from injury and illness, and what medicines to provide them are all important. Routine monitoring your goat's health through laboratory blood tests is an essential part of this effort. Routine biosecurity testing for diseases, pregnancy testing, and diagnostic testing when an animal is sick can provide a lot of information to goat breeders and owners.

Step 1: Decide what tests need to be performed. While veterinarians can provide all the services mentioned above, routine biosecurity (i.e. CAE or CL) and pregnancy testing are often done at an independent lab where the goat owner or breeder draws the blood and sends the specimen directly to the lab.

Step 2: Choose the lab that can provide the testing needed. Not all labs offer all tests. There are many labs in the United States such as Washington Animal Disease Diagnostic Laboratory (waddl.vetmed.wsu.edu), Texas A&M Veterinary Medical Diagnostic Laboratory (tvmdl.tamu.edu) UC Davis Veterinary Medicine (cahfs.vetmed.ucdavis.edu) to name a few. It is important to read the instructions provided by the lab on how to submit samples. While generally the requirements are the same, each lab will have specific requirements on collecting and mailing your blood samples.

If you have read this far and are still interested in drawing your own goat's blood on page 8 is a general step-by-step guideline.

SCORECARD BREAKDOWN

Evaluate the following 4 animals on General Appearance based on the ADGA and AGS scorecard and put in placement order from 1st to 4th. Answers based on Colt Churchill evaluation can be found on the last page.



A



C



B



D

(Continued from page 1)

Caprine Arthritis Encephalitis Virus (CAEV):

Identifying positive animals in the herd is a critical component of any CAEV prevention or eradication program. Once animals are infected with the virus, infection is permanent. While transmission is primarily vertical, from dam to kid via colostrum at birth, infection can also be spread through contaminated instruments (including needles). The standard test is a serologic CAEV cELISA test that detects viral antibodies in the serum.

It is not generally recommended that kids under six months of age be tested. Kids born to CAEV positive dams, and removed immediately at birth, may test positive due to maternal antibodies passed from dam to kid before birth, but not actually be infected. Kids fed heat treated colostrum may also test positive for a few months after birth due to maternal antibody transfer. Any kid under six months of age with a positive titer, should always be retested to determine if the results were due to maternal antibodies, or true infection.

Infected animals may test false-negative if there has not been sufficient time elapsed post-infection to mount an antibody response. As a general guideline, due to the variable time to seroconvert post infection, new animals entering the herd, over six months of age, should be quarantined and tested twice at least 30 days apart, and then annually thereafter.

Caseous Lymphadenitis (CL):

Caseous lymphadenitis (CL) is caused by the bacterium *Corynebacterium pseudotuberculosis*, and causes external and internal abscesses in small ruminants. Infection typically occurs via contact with infected material (open draining abscesses, contaminated fencing, equipment etc).

Serum blood testing is recommended for herd-wide surveillance. Due to the time it takes an infected animal to seroconvert, an individual negative test result may not rule out CL infection. However, that result is enhanced by repeated future annual testing, and herd cohorts also testing negative. Animals with questionable results should be retested in 2-4 weeks. Although relatively rare, false negative results can occur if an individual has chronic walled-off abscesses.

Basic on-farm herd biosecurity practices should include that all visible abscesses are considered to potentially be CL until bacterial culture proves otherwise. Abscesses should be lanced, drained, and cultured away from other goats to prevent the spread of infection. Potentially infected animals should be isolated pending culture results. Infected material should not be permitted to contaminate the environment by draining onto soils and pastures where CL can survive and remain potentially infective for many months.

A positive CL test result does not necessarily mean the animal is infected. Herds that are vaccinated for CL will always test positive on serology. Animals tested under six months of age may test positive due to maternal antibodies/colostrum antibodies. Any kids testing positive should be retested once they are over six months of age.

Johne's disease (*Mycobacterium avium* subspecies *paratuberculosis* - aka "MAP")

Johne's disease is a chronic wasting disease of ruminants. Progressive weight loss, and reduction in milk yields being the most obvious signs, but clinical signs typically don't occur until the affected animal is 2-4 years of age. Prevention is crucial, as infection is permanent. The most likely method of entry into a herd is through the accidental

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introduction of a positive, but healthy-looking animal into the herd.

This disease can be passed to offspring in utero from infected dams, through infected colostrum/milk, or environmentally acquired due to infected individuals shedding infective material into soils and water.

There is a lot of confusion and misinformation about Johne's disease testing, especially when to test, and which test to use.

ELISA—Screening for Johne's disease by serology is the most cost-effective method of screening individuals. However, the test is 99% specific, meaning there is a 1% chance of a false-positive test, but not as sensitive as PCR and culture methods. Antibodies to Johne's are generally produced late in the course of infection, and it may be months, or years, until sufficient antibodies are detected.

Animals over the age of two, especially in larger herds, may elect this method for broad annual screening of the adult herd. Positive animals should be retested using culture and PCR. Confidence in the Johne's negative status of a herd increases for each year of negative testing.

Fecal Culture — Culture is a more specific method of testing than the ELISA, but MAP grows very slowly in culture, and it may take up to 8 weeks to determine if the culture is negative. Positive cultures are usually then submitted for PCR to confirm the organism produced in culture is MAP, and not a contaminant.

Fecal PCR — This is the most accurate method of testing, and economical for large herds if samples are pooled. Fecal samples from 5 goats at a time (fresh, not off the barn floor) maybe combined for each sample submitted. In any group that results in a PCR positive result for MAP, individuals may then be retested to isolate the affected individual(s) from that group. This method is accurate, and for herds that have been historically negative, is more economical than testing all individuals separately.

An economical but effective routine Johne's screening plan might include annual screening by ELISA (a standard serology biosecurity screen for CAE/CL/Johne's), with intermittent pooled fecal PCR every two to three years, to increase confidence in the negative Johne's status of the herd. Any questionable results should always be followed up with fecal PCR testing.

For more information, see the University of Wisconsin School of Veterinary Medicine's Johne's Information Center website at www.johnes.org.

For most herds CAE, CL, and Johne's testing is likely sufficient. If you sell or consume raw milk, additional routine testing may be recommended by your veterinarian, including Brucellosis and Q-fever testing.

Routine annual herd screening is a valuable tool we can use as breeders to help protect our investment in our breeding programs, and our reputations as breeders. To minimize risk to an established herd, always purchase new animals from tested herds, and quarantine all incoming animals away from disease negative stock.

A Discussion On Long-Distance Traveling with Dairy Animals

By ADGA Judge, Will Pearson

How many goats per square footage of trailer space?

Obviously less is more, but my rule of thumb is the question, "Can every animal lie down comfortably all at the same time?" When hauling long distance the animals all should be comfortable and have space. Heat also builds up so if you're traveling during the summer, again less is more. For winter travel, a few more animals per square inch doesn't hurt anything.

How to keep goats cool in a trailer?

Number One— keeping cool is paramount! First and foremost, keep the trailer moving. Don't be afraid to take goats off the trailer and hose them off or pour water on them with a gallon jug. As the air moves through the trailer, evaporative cooling will occur. Install inner doors made with cattle panels. Only stop at gas stations with an overhang. Open up all doors to let air flow through. Cattle panel inner doors will allow you to open doors when stopped to increase the airflow in the trailer and keep the goats inside. Install scoop vents to allow air flow.

Finding stopping places along a route and overnight safely?

I make it a point to call fairgrounds to stop at or horse motels in advance. I have a list of all the ones I have stopped at over the years. Preparation is key here. Some will cost you money, some will be free. I have always felt safe, then again, I am a strong, six-foot tall guy. Perhaps if you are a woman, bring a strong, six-foot tall fella with you! Help is always welcome but sometimes not possible. I generally don't do more than 500 miles per day and set my fairgrounds up accordingly. I have gone from Braselton Georgia to Salem Oregon in 5 days stopping along the way. I almost always have a caravan of people going with me. There is safety in numbers!

Overnight on the trailer or unload?

I would never overnight on the trailer. Stop somewhere unload them and set them up for the night. I have stopped at other peoples farms' along the way in the long distant past. This is not something I will endeavor to do as much as possible. (I have a couple of friends whose management is of sufficient acclaim that I will allow my goats on the same farm.) For the most part, every time I have stopped at a farm I have come home with an unwanted gift: sore mouth, pinkeye pneumonia, intestinal issues. Friends' farms are a risk in my mind; fairgrounds especially in the off season are a better option. Also, you don't have to lose your focus on your animals because you have to be socially interactive with others. "He who travels alone travels fastest."

How long and often to stop for?

At night I like to rest at least as long as I was on the road. If you spent 10 hours on the road, give your goats at least 10 hours to recover, if not more. Gas stops

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totally depend on the heat. If it is 70 degrees then 1/2 hour to get gas and water animals is reasonable; if it is 100 degrees then a quick stop is better. If you have a shady spot and the animals are drinking water and you have hosed them down, then you can take a minute more. Air moving through the trailer is your best friend; when you are still, heat builds up. This is where you need to be prepared as you are going down the road. You could get stopped in a 2 hour delay on interstate 80 in the middle of Nevada. You need to be ready with gallon jugs of water, spray bottles of alcohol, possibly a generator to run fans. If you can get off at an exit and wait somewhere with the goats tied to the side of the trailer, until the accident is cleared—do it!!!! This is better than ending up with a dead goat. (This happened to us in 2009 going to the Nationals in Sacramento.)

How long a stretch is okay without a stop?

As long as you can. I drive from a full tank to a 1/4 tank frequently. Sometimes my bladder is more in charge than the fuel consumption, but that is what I do. Air flow is your friend.

What are signs of distress?

In the heat, breathing hard and panting. Taking a hose to your animals, soaking them down so that evaporative cooling can come into effect. Remember, goats don't sweat, so doing it for them is definitely a kindness. Of course diarrhea and other symptoms are signs of distress as well. Use your favorite medication to fix those, but preventing them is better. Set up your barns like you would at a show. Handling your animals and making sure they are in tip-top condition before you leave, is one of the best ways to prevent stress problems. In other words, do your homework. If you are going to Nationals, this is the show where you are showing the best of the best. If the doe is not "on" - don't take her. If you have a magnificent animal but she is a Nervous Nellie, you may want to think about her. If you know you are arriving on Saturday but she doesn't show until Wednesday, ok maybe she will get over herself by then. If she shows on Sunday, leave her at home. My perfect number to take to Nationals is 6 to 8 milkers. If you take kids pick one or two. Six to 8 milkers gives you a proper herd that functions as a unit, especially if you open up your pens at Nationals and let them roam together as they would at home. It is imperative that you bring all your normal grains and hays that they eat at home and add nothing else until after show day. Maybe a grass hay that is different would be ok. If your goats have never been on Alfalfa and you arrive and start feeding Alfalfa at the show, you're asking for big problems. Keep everything the same, if possible. Again, do your homework and then you won't have to change anything when you get to the show.

What happens if you break down?

This is where your planning skills come in very handy. A truck and trailer in proper running condition, that has had its proper maintenance will most likely not have problems. There is always the odd time when it will break down. First and foremost, make sure you have tools and of course AAA. Always keep an ADGA

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Long Distance Hauling (Continued from page 7)

directory with you. I know people from just about every state in the union. If I received a phone call in the middle of the night, I would help a struggling goat farmer without thought. That directory provides you with like-minded people that you can trust. I would not be able to help you with anything mechanical, but I can get your animals, possibly your children/ family to safety until someone else can fix your truck. Also, if you broke down reasonably close to me, I have a mechanic on speed dial that can help you.

How much time advance planning?

I am already planning next years trip to Nationals and it is 11 months away. We are only 4 hours south of Louisville. Planning for long important trips takes time and effort. Months of time are needed to get ready, as far as I am concerned. Everything from equipment to vehicle maintenance needs to be thought about. Of course, so is getting the animals ready. Deciding whether to show your animals in the spring or just leave them to rest. I often have my National show string make their debut for that year at Nationals. I may take the odd doe out if she is not finished, but if she is "hot," I want her to stay "hot" so I will often choose not to stress her.

Blood Draw (Continued from page 3)

Step 3: Gather your supplies. You will need a needle and syringe, a blood collection tube, and alcohol wipes, a hair trimmer, and a safe sharps container. We use a 3cc syringe with a 20 ga X 1" needle, a red stopper 10 ml blood collection tube, and two alcohol prep pads per blood draw.

This is a great time to find a helper! Drawing blood on a goat is a two-person job. You need to find a partner that can help hold the goat still and in the correct position. This will give you the best chance of successfully drawing blood on the first attempt. Nobody, especially your goat, wants you to poke them multiple times.



Step 3.5: Wash your hands! It's always a good idea to wash your hands with soap and water.

Step 4: Prep your goat. A good location to draw blood is from the jugular vein in the neck of your goat. The jugular vein runs parallel to, and on both sides of, the throat. To create a clean and easy to view site to draw blood from, shave a small patch of hair from the neck on one side of the throat half way between the chest and lower jaw.

Step 5: Find the jugular vein. Have your partner lift and slightly rotate the goat's head while you press and hold on the jugular vein at the base of the goat's neck with one hand. You should see and feel the vein swell. When you press and release low on the jugular vein you will notice the swell and contraction of the vein. Be sure not to mistake the throat as the vein. With your other hand feel for the vein. It will feel firm yet pliable when pressed. Practice locating the jugular vein several times before attempting to insert your needle syringe to draw blood.

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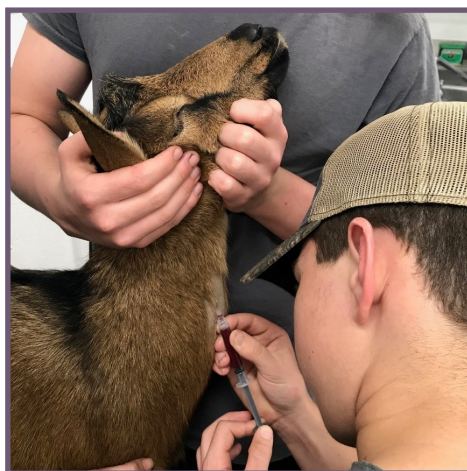
Step 6: Locate the puncture site. Once you find the jugular vein and can trace its length parallel to the throat, locate a site to insert your needle. Clean the area by wiping the skin at the injection site with an alcohol prep pad.

Step 7: Secure your goat. Confirm your partner is holding your goat firmly with your goat's head held high and slightly tilted. If you have a strong or squirmy goat your partner can straddle the goat's back while the goat is backed into a corner. This can provide better control of the goat as they tend to want to back out and away. Straddling the goat puts the handler in an optimal position to control the goat's movement while controlling the position of the goat's head and neck.

Step 8: Insert the needle and draw blood. With one hand insert the needle syringe at a shallow angle to, and parallel with, the jugular vein just enough to puncture the vein without going through the backside of the vein. With your other hand



gently pull back on the syringe plunger. If your needle is inserted correctly the blood will easily flow into the syringe. If there is resistance on the plunger then you can readjust the needle position without completely removing the needle from the goat. If you must remove the needle, fully evaluate your first attempt and assess what you need to correct on your second attempt. When first learning, we found inserting the needle too steeply and too far into the vein were our most common mistakes.



Step 9: Remove the needle. Place your second alcohol pad on top of the needle at the injection site while removing the needle, wipe the injection site again with this clean alcohol prep pad. You can apply light pressure for a few seconds if the injection site continues to bleed. Note: It is not advised to recap the needle. The chance of sticking yourself increases significantly trying to recap it.

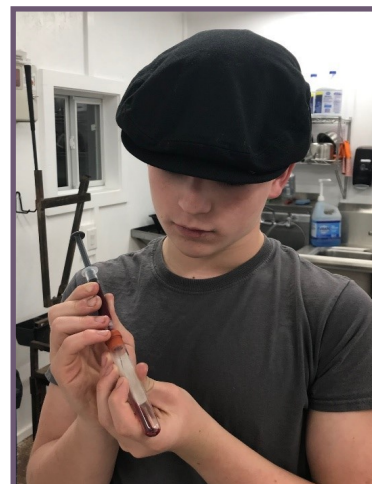
Step 10: Transfer blood to collection tube. Insert the needle of the syringe into, and through, the top of the red rubber stopper of the blood collection tube. The tube's vacuum will pull the blood from the syringe into the collection tube.

Step 11: Dispose of the needle: Once the blood is transferred to the collection tube remove the needle syringe from the blood collection tube. Do not recap the needle. Immediately dispose of the needle syringe into a sharps collection container.

Congratulations! You have successfully and safely collected your blood sample!

Step 12: Handling your blood sample(s). Once you have collected your blood sample(s) you need to refer to your lab's shipping and handling requirements. You will need to label your samples according to the lab's instructions. You may need to refrigerate you blood samples and ship your samples within a certain amount of time.

It may seem challenging but with a little practice you can become skillful and efficient in drawing blood samples from your goat herd. It can be rewarding to learn this valuable skill to add to your toolkit as you continue to care for your herd.



Recipe of the Month

LEMON RICOTTA COOKIES (from Art of Cheese)

Kate Johnson

Ingredients:

2 ½ cups all-purpose flour
1 tsp baking soda
1 tsp salt
1 stick unsalted butter,
softened
2 cups sugar
2 eggs

1 (15 ounce) container whole milk ricotta cheese (or
homemade goats milk ricotta - that's about the equivalent
of about 2 cups)

3 TBSP lemon juice
1 lemon, zested

Directions:

Preheat oven to 375 degrees

Combine flour, baking powder, and salt in one bowl and
set aside.

In another bowl, use a mixer to combine butter and sugar
and beat until light and fluffy. Add the eggs, 1 at a time.
Add the ricotta, lemon juice, and lemon zest. Beat to
combine. Then add the dry ingredients.

Line baking sheets with parchment paper or spray with
non-stick spray. Spoon the dough, about 2 TBSP per
cookie onto the baking sheets. Bake for 15 minutes, until
slightly golden at edges. Remove from oven and let cool.

GLAZE:

Combine powdered sugar, lemon juice and lemon zest in
small bowl and stir until smooth. Spoon over cookies and
let set until hardened.



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**PROMOTING THE
NIGERIAN DWARF
BREED SINCE 1996**

Editor:
Karen Goodchild
OK Doe K Dairy Goats

Please let us know if you have a
comment or article idea!

Scorecard Corner:

I place this class of Nigerian Dwarf junior does based on general appearance only D-C-A-B. D is placing over C for her advantage in being more level across that top line and more level in the rump from thurl to thurl. D is also more smoothly blended in the front end assembly both at the point of shoulder into the chest wall and at the top of the shoulders against the body wall compared to C. D also has her forelegs more squarely placed underneath her withers, is straighter in her forelegs when viewed from the side, slightly stronger on her rear pasterns, and more correctly angulated in her rear leg set being more perpendicular from hock to Pasternak compared to C. C is placing over A for her advantage in being more smoothly blended from the loin into the rump and being more level in her rump from hips to pins. C is also showing a longer bone pattern throughout than A and is cleaner in her knee. A is placing over B for her advantage in being more level in that top line with less tendency to dip in the chine. A is also more level in that rump from hips to pins than B and tracks with more width between the jocks and less tendency to toe out on her rear legs compared to B. While B is standing in fourth today for not showing the overall level ness and correctness on feet and legs compared to the other does in the class she should be commended for her smoothness of blending in that front end assembly.