

Screening for Diseases when Buying Goats and Sheep– *tatiana Stanton* Sept 19, 2017

The volume of goats or sheep you are trying to buy and how soon you need to reach target size often affects how strict you are about their disease status. If you are buying a small number of animals, you don't need to buy from several herds and should be very restrictive about what diseases you will not tolerate. Even when needing to “get big fast”, you may actually reach your target size faster if you are highly selective about disease status when buying your foundation stock. **The contagious diseases you initially introduce into your herd or flock will haunt you for years to come.** The following are common infectious diseases found in US herds. Be sure to ask sellers directly about the status of these diseases in their herds. People are often more honest when asked directly about specific diseases rather than asked “are your animals healthy”.



Caseous Lymphadenitis abscesses

This is also known as *Corynebacterium pseudotuberculosis* and affects both goats and sheep. These abscesses are found on lymph nodes often on the animal's shoulder or on the jaw just under the ear. These lumps are odorless and are usually filled with whitish green (snot colored) thick pus. The pus is highly contagious and contact with it is what usually spreads the disease from one animal to another. The bacteria usually cannot survive outside in the winter in the NE United States.

A herd will occasionally have abscesses that are not CL. Instead, they may be caused by Caseous Pyogenes or other fairly benign bacteria which are not highly infectious. Therefore, you may end up visiting some herds that say they have had a couple of abscesses but have had them cultured and they were not CL. Some animals get “lumps” that are due to tooth infections or salivary cysts. Some animals may get reactions to subcutaneous vaccines and have a lump where the vaccine was given. All these conditions should present no threat to you.

If an infected herd totally ignores the CL abscesses in its animals it is very easy for each and every animal to become infected. This is especially true if the animals are milked or fed in some sort of head stanchion because the pus from abscesses around the head and shoulders gets on the head stanchion or keyhole feeder and passes the disease on to the next animal that puts her head through the same head lock or keyhole.

However, some infected herds have a low incidence of CL abscesses because of the way they manage their animals. These herds usually separate out and isolate any animal that has an abscess that is close to bursting. They lance the abscess and wait until it completely dries out before putting the animal back in the herd. Or they may inject a small amount of formaldehyde into the abscesses to shrivel them up. They will usually cull out any animal that gets a second

abscess. These herds are of some risk to you because an animal can have an undetected internal CL abscess in the lymph nodes in their lungs and can spread CL by coughing. However, they would be of lower risk to you than a herd with a high incidence of CL or a herd that makes no effort to control it. The CL organism lives in soil but does not survive in the soil in our NY winters. So NY pastures will be free of CL after a winter's rest (assuming you had no goats or sheep on them for the winter). A herd that has observed no abscesses for 12 months is probably free of the disease.

The abscesses themselves can be fairly benign although there are some virulent strains that cause a high incidence of internal abscesses. These internal abscesses will eventually kill the goat or sheep. Meat can be condemned for CL abscesses but abscesses generally do not show up in animals less than 6 months old. There is a sheep vaccine (CASE-BAC, Colorado Serum Company 1-800-525-2065) to control caseous lymphadenitis in sheep vaccinated prior to exposure to the disease. The vaccine has shown little or no benefit when animals with visible signs of the disease are vaccinated. There is also a goat vaccine (Texas Vet lab 1-800-284-8403) but it has not been tested on pregnant animals. If you purchase animals from a vaccinated herd that has CL present, these purchased animals will generally require additional annual lifetime boosters. The vaccines are not 100% effective and a common reaction to the vaccines is localized swelling. There is a blood test readily available to screen goats and sheep for CL. Keep in mind that vaccinated animals will test positive.



Contagious foot scald and foot rot

This condition is also very contagious. Again, it affects both sheep and goats and they can spread it to each other. It starts as a small smelly blister in the soft tissue above and between the animal's toes. The disease is caused by a combination of two organisms. Pastures and facilities will only be infected for 2 weeks after the removal of infected animals from them. However, the organisms can survive in carrier animals for a very long

time. An animal can look free of it in dry weather and then show up with it when the environmental conditions get favorable again (i.e. get wet or snowy). It is not the primary cause of death but an animal that has it is usually in a lot of pain (imagine a really horrible case of athlete's foot), limps badly, and ends up having trouble keeping weigh on.

It is very difficult to clear up. Treatment to eradicate the organism is most effective in dry months (when you typically observe few signs of it) and usually consists of moving the goats and sheep to a part of the barn or pastures no goats or sheep have been in for at least 3 weeks and trimming their the hooves down short and walking them through a foot bath of Copper or Zinc Sulfate daily. Intramuscular tetracycline injections are also effective and animals are often treated with both foot baths and injections. Recovered animals are moved to another clean area.

Animals that relapse are considered potential carriers and are culled if they seem to always be the first to get reoccurrences. The disease is very time consuming to deal with and it is far better if you can steer clear of it. Keep in mind that you are most likely to eliminate it from your herd if you make an all out assault during dry weather. Goats rarely go on to show actual foot rot while sheep often move on to having the extremely malformed feet associated with foot rot.



Sore Mouth

The organism can live in your soil for many years if the dried up irregularly shaped scabs on an infected animal fall off and contaminate the soil. It can also be spread directly from animal to animal when scabs from an infected animal come in contact with an open wound or scratch (i.e. often the cracked skin around a goat's mouth, eyes or udder) on a previously unexposed animal. The disease usually causes little or no problem if it occurs after weaning but can be a very serious problem if it occurs while dams are still sucking their offspring. Nursing can become

painful to both the offspring and the dams leading to mastitis problems in the dams and starvation problems in the kids or lambs. Treatment is usually not necessary (although drying agents can help) except in the case of young kids and lambs and nursing dams. In these cases the kid or lamb may need to be bottle-fed to encourage it to consume enough and the dam may need to be gently hand milked to avoid getting mastitis. The scabs should not be torn off as this may encourage secondary infections.

Sore mouth is contagious to humans. It is known as 'Orf' in humans. Goats, sheep and humans who have had it are usually protected against it for several years. There is a vaccine for it but the vaccine is usually only recommended for herds that have recurring problems with sore mouth. This is because it is a live vaccine and the scabs formed in response to the vaccination are also contagious. It is also very easy to make your own vaccine to vaccinate kids or lambs in your herd shortly after birth. It is hard to find herds that have not had it at one time or another. However, there are many herds that may have gotten it once in a few animals and never gotten it again. These herds would be lower risk than herds that have it annually. It is always a good idea to avoid buying from a farm when sore mouth is actively present. There is no blood test.



Johnes Disease

This disease infects cattle, goats and sheep and is very common in US dairy cattle herds. It generally incubates for at least one year before becoming active in the animal. It causes chronic wasting and diarrhea and severely compromises the animal's immune system. Some animals in well managed herds can be infected and never show symptoms throughout their lifetime. Most healthy, mature animals exposed to the organism do not develop the disease. However, calves, kids and lambs are very susceptible to infection. The disease is shed in the manure. Therefore

minimizing the exposure of goat kids and lambs to manure from mature animals is very important to control Johnes. They can also get infected by drinking milk from an infected animal. Pasteurization of milk will not kill Johnes unless the milk is heated for a long period at high temperatures, i.e. at least 160 °F for 10 minutes. Dehydrating milk to make it into milk replacer does kill it. It is important to keep mature animals out of feed mangers and to avoid a high density of animals out on pasture. The disease is insidious and it is possible that many flocks and herds in NY may have a low incidence of Johnes in which case they may never see any symptoms or the problems associated with it. In contrast, high incidence herds will have noticeable cases of diarrhea and death due to wasting away. There is no surefire test to identify the disease in early stages. Screening choices should be discussed carefully with your veterinarian. There is an ELISA blood test to detect antibodies for the disease but animals need to be far enough along to be producing antibodies. Animals showing visible wasting away signs will generally show positive on an AGID blood test as well. Unfortunately, asymptomatic animals can be shedding Johnes in their feces and still test negative for Johnes on ELISA and AGID tests. However, the organism can take 3 months to show up on a fecal test. A PCR test will detect Johnes in the feces far sooner and cheaper (7 to 10 day turnaround) but is still undergoing validation for goats and sheep. Because of the high cost and time of fecal testing, herds and flocks that monitor for Johnes generally rely on annual ELISA tests. Testing of all animals that show signs of wasting is also a good practice. Separation of newborns at birth and artificial rearing on heat treated milk or replacer sharply cuts down on the risk of Johnes.



CAE – Caprine Arthritis Encephalitis

About 80% of the dairy goat population of the US used to test positive for this disease. Only a small percentage of positive animals will generally show any negative symptoms. Appearance and severity of symptoms appear to be adversely affected by stress, particularly stress from confinement or high milk production. It is spread from the milk or colostrum of a positive animal to a previously unexposed animal. It has about a 12 month incubation period before symptoms start to show up. Common symptoms are debilitating arthritis in the

knees and/or congested (hard) udders. There is a rare, very acute, form that causes spinal arthritis in young animals. Meat goats tend to have far less problem with it than do dairy goats because they get it less often (no exposure through a milk line or from drinking bulk colostrum – they usually only get colostrum and milk from their very own mother) and are under less stress (rarely confined and rarely have a huge amount of milk in their udder). When buying dairy goats, find out what sort of CAE prevention program the owner's farm has been practicing so that you can evaluate the CAE risk from that herd. There is an ELISA blood test available to screen mature goats and older kids for CAE.



OPP- Ovine Progressive

Pneumonia is a slowly progressive viral disease of sheep. It is very similar to CAE but expresses itself in the form of respiratory problems rather than arthritis problems. Although it can be passed in the colostrum and milk, unlike CAE it is more commonly passed through coughing and other contact with an animal already showing symptoms. Incubation is very similar to CAE and there is also an ELISA test available for OPP to screen mature sheep and older lambs.

Coughs

There are some mycoplasma coughs that goats and sheep tend to get exposed to at shows and auctions. Once an animal has had a good case of one of these they tend to be immune for several more years. It is nice to avoid these but they are essentially “kindergarten” diseases. Tetracycline drugs can help but usually the animal has to build up their own immunity. Check

with your veterinarian for recommendations.



Pinkeye

Symptoms are weepy eyes which then cloud over causing the animal to become temporarily blind. Blindness is always temporary unless a secondary infection occurs. Occasionally the goat will get some scarring of the cornea. Unlike cattle and sheep, mycoplasma organisms rather than chlamydia organisms are the chief cause of pinkeye in goats. Therefore your goats may get it while your sheep are unaffected and vice versus. It spreads from animal to animal by flies. Try to avoid buying from a herd when it actively has pinkeye but keep in mind that it may be difficult to find a herd that has never had it. Once an animal's natural immunity kicks in it can battle it off but keeping the animal in a dark but dust free area and feeding it off the ground while it is combating the disease will hasten

recovery. Eye ointments and rinses can help keep more serious secondary infections from taking advantage of the situation. In severe cases, your veterinarian may recommend giving intramuscular injections of tetracycline. Antibiotics may also be injected with a small needle into the third eyelid but this is usually unnecessary.

Parasites

Internal parasites such as worms and coccidia can cause very serious problems and even death in goats and sheep. External parasites such as lice and mange mites can also reduce the health of your animals and can spread from newly purchased animals to the rest of your herd. It is a good idea to deworm animals you purchase with an effective wormer and to dust them for lice.

However, talk with your veterinarian first to check their recommendations. Your vet may want you to deworm new animals with all three families of dewormers to try and avoid having worms from other farms come to your farm or may want you to first check fecal samples to see if any deworming is even necessary. If you purchase kids or lambs at or shortly after weaning, it is often recommended to drench them with a medication that will kill coccidia (a small intestinal microorganism that can be deadly in large amounts or when animals are stressed) such as Sulmet, Albon, or Corid for 4 to 5 days and put a coccidiostat such as deccox, bovamin (lambs), or rumensin (kids) in their feed or salt. Some of these coccidiostates are very deadly for horses. Others such as Sulmet and Albon now require a prescription from a veterinarian to purchase. You can have your veterinarian do fecal samples on your new animals to see if they are infected with a large number of worms or coccidia.

Care of new animals

You should diligently monitor the lower eyelid membrane color (pale color indicates anemia possibly from barber pole worm infection), temperature (normal temp is ~102° F), stool consistency and appetite of your goats or sheep for the first few weeks after purchase. At all times, keep in mind that anemia, diarrhea or loss of appetite are very worrisome symptoms in a goat or sheep. If at all possible, quarantine newly purchased animals away from the remainder of

your herd for a minimum of 3 weeks after purchase.

Be sure to ask very specific health questions when buying animals so there is no misunderstanding about what disease you are trying to stay clear of. You and the prospective seller may not have the same opinion of what diseases you cannot tolerate in your herd. In both verbal and written communications be sure to identify diseases individually rather than just asking or requiring that “animals be healthy”. You may want to invest in blood testing your potential purchases for specific diseases. If so, find out what the cost of the testing is going to be in advance. Costs for the same type of test can vary from lab to lab so it may be helpful to shop around. Discuss with a veterinarian or diagnostic lab the reliability of the different tests. Make sure you and the prospective seller are agreed on 1) whether a disinterested third party needs to collect and handle the samples (i.e. a veterinarian), 2) who is going to pay for sampling and testing, and 3) what tests, labs and criteria will be used to determine whether you reject or accept animals. **If at all possible, try to have any testing done prior to animals arriving at your farm so that deposition of positive animals is an issue for the original owner and not you.**

Locating animals

Avoid buying at local auctions. Instead try to buy privately. Breeder directories, farm face book pages or websites, Craig’s List ads, etc. can help you locate animals. Cornell has a list serv called the Cornell Sheep Goat Management List Serv (sheepgoatmanagement-1@cornell.edu) that you can sign up for at <http://blogs.cornell.edu/newsheep/srlistserve/> . It can be very helpful for locating breeding stock. In some cases if buying large amounts of animals at one time you may need to work through a livestock broker from a region of the US where there are already a lot of goat or sheep dairies. Again, please keep in mind that well managed goats and sheep multiply rapidly. For the sake of flock or herd health, it may be far wiser to screen heavily and buy a smaller number of animals to begin with and take a few years to expand your herd to your target number rather than purchasing a large number of animals initially to immediately meet your size.