

Dealing with Abortions in Dairy Goat Herds

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Abortions are a common problem in dairy goat operations and can lead to significant health and economic issues. In severe cases upwards of 40% of the herd can abort which leads to difficulties in replacing cull animals, lost milk production and concurrent health concerns. For these reasons it is very important that abortion storms be evaluated for a cause in order to apply appropriate intervention strategies that will decrease disease transmission. This fact sheet will provide some input on how to go about determining a cause, what actions to take immediately while waiting for a diagnosis, what the common causes of abortions are and how to prevent abortions in your herd.

Abortion diagnostics

All dairy goat herds will experience some level of abortions for which the cost-benefit of pursuing diagnostics does not warrant investigation. These abortions are generally the result of individual animals experiencing some form of adverse event (ie. systemic infection from some cause, trauma, stress etc) that results in abortion of the kids. Importantly, these abortions are events that are not likely to result in a large scale abortion storm, and while a specific cause may be determined, the low level of occurrence does not justify intervention. In contrast, some forms of abortion can rapidly move through a herd causing significant losses, and it is very important that these cases be investigated early and extensively.

We generally recommend that if the herd experiences abortions in excess of 3-5% of the total number of pregnant animals in the herd or if more than one animal aborts in a short period of time (ie. couple days to a week depending on how many are bred) you should pursue a diagnosis.

Work with your local veterinarian to get appropriate sample collected and submitted to the diagnostic laboratory. **The most important samples that can be collected are the entire aborted fetus and the placenta.** Inclusion of a large piece of placenta almost doubles the likelihood that the laboratory will be able to determine the cause of the abortion. It is also important to be prepared to submit multiple samples if animals continue to abort. The cause of many abortion storms fail to be identified on the first submission but are readily identified on subsequent submissions.

Samples should be collected as soon as possible and refrigerated until submission. DO NOT freeze the samples. Be sure to provide a comprehensive description of the situation to the laboratory and let them know how many pregnant animals are at risk as well as how many have aborted at the time of submission. If new animals have been introduced into the herd, be sure to include that information.

Steps to take immediately

The following precautions and steps should be taken immediately and are beneficial in limiting the spread of most causes of abortion:

- 1) Wear gloves when handling aborted tissues or fluids. Wash your hands before eating or touching anything else. Most causes of abortions are contagious to humans. Immuno-compromised individuals, the elderly, cancer patients or pregnant women should not be allowed to have contact with the aborting animals.
- 2) Maintain segregation of animals – Do Not move animals from the pen with the abortion to other pens and do not move the animal that has aborted out of the original pen into a pen with other animals. These moves only serve to spread the disease.

- 3) Clean up the aborted fetuses, fetal fluids and placenta. After collection of samples for diagnostic submission burn or bury the remainder of the tissues and fluids.
- 4) If animals are being fed on the ground, discontinue this practice and make sure all feed and hay is placed in elevated clean feeders. For instance, when round bales are used for hay often does will go up on the mound of hay to abort where it is less muddy or wet. Then does continue to eat off the round bale and consume the infectious organism.

Common causes of abortion in dairy goats

The most common causes of infectious abortions in dairy goats include Q-fever (*Coxiella burnetii*), Chlamydiosis, and toxoplasmosis. Q-fever is a bacterial organism that can be spread by aerosol and is highly contagious to humans. If this organism is suspected individuals handling the animals should wear a protective N95 mask available at many home supply stores or hardware stores. Toxoplasmosis is associated with shedding of the organism in cat feces that contaminates the environment or food sources for the goats. Only animals that are exposed for the first time to this organism during their pregnancy will abort (ie. if exposed prior to pregnancy they are immune).

Other causes of abortions include *Campylobacter*, *Listeria*, *Salmonella*, *Leptospirosis* and viruses (BVDV, Cache Valley, Bluetongue), but are less common than the three listed above.

Abortion prevention

Maintaining a healthy low stress herd will do more to prevent abortions than almost anything else. Animals that are introduced into the herd should come from healthy herds with no history of abortions recently and should be maintained in segregation for at least 2-3 weeks. Ideally pregnant new purchases should not be commingled with the remainder of the herd until

after they have kidded. At present there is no vaccine available in the United States for Q-fever or toxoplasmosis. There is a commercially available chlamydial vaccine that has variable efficacy in preventing abortion storms due to this organism.

While the absence of cats would definitely decrease the disease process due to toxoplasmosis, this is likely unrealistic on most farms. Since the infection is most common in kittens, we recommend the maintenance of a stable neutered population of barn cats that will not reproduce on their own and will prevent the majority of feral cats from frequenting the area (cats are territorial, so if no cats are present feral cats rapidly fill the void and are high risk with respect to toxoplasmosis).

Many veterinarians recommend the use of feed grade tetracycline to prevent abortions in small ruminants. Such an option is not available in dairy goat operations since it would result in residues in the milk. Furthermore, recent research suggests that feed grade tetracycline had no impact on preventing Q-fever abortions, and since toxoplasmosis is a protozoan (not bacterial) it will not be impacted by tetracycline. Therefore we do not generally recommend this treatment in dairy goat operations due to residues and lack of efficacy.

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