

Johnes Disease in Sheep & Goats

What is Johnes Disease?

- Bacterial infection: *Mycobacterium avium paratuberculosis* (MAP)
 - Found worldwide in cattle, bison, elk, deer, camelids, goats, and sheep.
 - Incurable and often fatal
 - Hardy, it can live in soil/feces on the ground for up to a year.
 - Economic impact is significant. Loss of milk production, carcass yield, stock, feed, adult animals, resources, time, labor, etc.
- Prevented with Biosecurity!
 - Closed herd; testing surveillance plan; wash boots and clothing; don't share tools/needles, etc.
- Reportable monthly to the Animal Health Team @ ME DACF.
 - Maine has had confirmed/reported Johnes cases in sheep and goats
 - For more info on reportable diseases in Maine, visit: [Disease Information: Animal Health: Division of Animal and Plant Health: Maine DACF](#)

What are the Symptoms in Sheep and Goats?

- In sheep and goats, the clinical signs are harder to notice than in cattle.
- **SHEEP:** Intestines become thick and less efficient at absorbing nutrients.
 - Sheep continue to eat but lose weight and “waste away.”
 - Less than 20% of sheep show diarrhea.
 - In about 70% of sheep, the disease may remain asymptomatic. Some individual animals never show signs of the disease but shed Johnes bacteria in their feces and infect other sheep as well as contaminate the environment.
- **GOATS:** weight loss, poor performance & occasionally clumpy feces are the only visible symptoms.
 - Important to note, not all clumpy feces are due to Johnes disease.
 - Unexplained rapid weight loss is the most common clinical sign.
 - Affected animals usually show signs before they are 1 year of age.



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How to Prevent Johne's Disease?

- A closed herd is a safer herd. A closed herd is a herd that doesn't bring in new animals, ever. Even if you test the animals before bringing them in, your herd isn't closed!
- Work with your veterinarian! Develop a strategic plan for Johnes prevention & control.
- Basic Strategy Plans Include
 - Lambs & kids should be born in a clean environment.
 - Separate young stock from adults to reduce exposure risk.
 - Avoid manure contamination of feed.
 - Use feed tubs and bunks, don't feed on the ground & avoid over-grazing.
 - Keep heavy-use turnout areas as clean as possible.
 - Don't use the same equipment to handle feed and move manure.
 - Avoid manure contamination of water sources where animals drink.
 - Use colostrum from Johnes-negative animals. Do not pool colostrum.
 - Feed pasteurized milk or a commercial milk replacer instead of raw milk to supply the needs of newborns. Never feed pooled milk or waste milk.
 - Practice good milking hygiene protocols to prevent manure from getting into the milk.
 - Identify and remove, or keep separate, all test-positive animals.
 - Prevent infection from spreading by culling, or separating offspring of infected mothers as soon as possible.
 - If purchasing herd additions, try to buy from low-risk herds.
 - Test all animals intended for purchase BEFORE you bring them home.
- Compost manure appropriately for 6 months before spreading it on fields, or wait 6 months to graze fields that have been fertilized with fresh manure.

What do I do if I Suspect Johnes?

- Contacting your veterinarian is the first step.
 - Fecal samples collected over at least 3 days to submit for testing can be helpful because sheep and goats do not shed the bacteria that cause Johne's in their feces all the time.
- Making sure a permanent ID is in place will help identify animals and ensure health record validity. This ID helps validate a healthy animal as much as a possibly sick one.
- **Positive results on a PCR and or culture test must be reported by your veterinarian** to the Maine Department of Agriculture, Conservation & Forestry State Veterinarian's Office within 30 days.
 - The ELISA Johnes test is not validated in goats and sheep; this test helps decide which animals to test by Johnes PCR/Culture. A Johnes ELISA negative should never be counted as a true negative, and a positive should never be counted as a true positive on the ELISA test.

Learning Resources

- www.johnes.org
- <https://www.aphis.usda.gov/nvap/reference-guide/control-eradication/johnes> 2