Salmonella Dublin - Multi-Drug Resistant
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Salmonella Dublin has increasing been isolated from samples submitted to the Animal Health Diagnostic Center at Cornell University from cattle premises in the Northeast.

Why worry about Salmonella Dublin?
- Multi-drug resistant
- Very difficult to treat
- Can be fatal
- Can transmit between cattle and human
- Carrier animals continue to shed the organism even if they appear healthy.

What is Salmonella Dublin?
Salmonella Dublin is a strain of Salmonellosis that is a bacterial infection that often presents as a respiratory disease in young calves. Due to the unusual presentation of this type of Salmonella, it is likely many cases go undetected, and are misdiagnosed. Salmonella Dublin is resistant to most antibiotics making it very difficult to treat.

How do I identify a calf with Salmonella Dublin?
Salmonellosis is often a disorder of the GI tract and associated with scours. However, Salmonella Dublin often presents as a respiratory illness in calves less than 2 months of age. Other clinical signs include septicemia, abortions in mature cattle and/or diarrhea.

During active infection animals spread Salmonella Dublin in manure, saliva, nasal secretions, urine, uterine fluids, milk and colostrum (body fluids). Salmonella Dublin is highly contagious (animal to animal and animal to human) and sick animals can easily contaminate their environment.

Sick calves that do recover may become carriers that can shed bacteria for the remainder of their lives. Subclinical, carrier animals maintain this infection in the herd, shedding the pathogen in feces and milk/colostrum. Overcrowding, poor ventilation, illness, poor hygiene, transportation, inadequate nutrition and other stressors can cause a subclinical carrier animal to become a clinically infected animal.

How do you determine if your calves or cows have Salmonella Dublin?
If you suspect you have Salmonella Dublin on your farm contact your veterinarian ASAP. They can work with you and the Cornell Animal Health Diagnostic Center on sampling infected animals and designing the optimal testing strategy for your herd. Currently there is a Salmonella Dublin ELISA test for milk and blood samples. Your veterinarian may also recommend taking some fecal samples to rule out other potential pathogens.

What should I do if I get sick or an employee becomes ill?
Salmonella Dublin can cause illness and even death in people and should not be taken lightly if someone becomes ill. If caretakers show signs of serious illness: fever, delirium, vomiting, diarrhea, and abdominal cramping they should contact their physician immediately.

Preventing the spread of Salmonella Dublin
- Strict biosecurity measures. Isolate new arrivals for 2 weeks. Purchase animals from Salmonella Dublin negative herds. Do not allow outside vehicles or visitors to access cattle or feeding areas.
- Excellent calf management: Clean, dry calving pens, remove calves from dams ASAP, place in clean, dry, well ventilated environment where they do not have contact with other calves or adult animals.
- Maximize colostrum management: Feed 4 qts high quality colostrum to calves within 1 hour of birth. Do not feed colostrum from positive cows. Look at feeding a colostrum replacer if you are having a Salmonella Dublin outbreak in your milking herd.
- DO NOT feed raw waste milk calves.
- Sanitize and disinfect buckets & bottles as well as any shared equipment between groups of animals.
- Farm personnel should practice good hygiene. Wash hands, boots frequently. Change coveralls and wash often.
- Identify and isolate newly sick calves immediately.
- Maximize animal resistance by preventing herd stress.
- Environmental cleanup: removal of all organic material (bedding, contaminated feed, manure), complete wash down of all surfaces, feeding areas, and equipment with water and a detergent cleaner and then the application of a disinfectant. Cleaned areas should be dried quickly.
- Do not allow consumption of raw milk by employees or other individuals on the farm.

Resources:
http://nyschap.vet.cornell.edu
http://ahdc.vet.cornell.edu

These fact sheets are made possible through the collaborative efforts of the CCE County Associations of NNY (Clinton, Essex, Franklin, Jefferson, Lewis & St. Lawrence) To contact any of the NNY CCE offices directly: Clinton: 518-561-7450; Essex: 518-962-4810, Franklin: 518-483-7403; Jefferson: 315-788-8450; Lewis: 315-376-5270; St. Lawrence: 315-379-9192.