

# Salmonella Dublin



*Salmonella enterica* subspecies *enterica* serovar Dublin (S. Dublin) is an infectious disease found primarily in cattle however can affect other species including humans. S. Dublin is present in Nova Scotia and is a notifiable disease under Animal Health and Protection Regulations.

## How is this disease spread?

- S. Dublin is a bacterial disease shed in the feces of sick and carrier animals. It is spread by:
- Direct contact with infected animals
  - contaminated feed, water, unpasteurized milk
  - contaminated areas/pastures, equipment, and clothing and footwear

## Risk to herds

S. Dublin causes severe, disease, death and production loss. It is resistant to multiple antimicrobial drugs which makes treatment difficult.

- Calves may die suddenly without symptoms
- Cattle can be symptomatic or asymptomatic carriers
- Young calves between the ages of 2 weeks to 6 months are most often affected
- Older cows tend to be less affected but may be carriers
- Highly contagious

## Risk To humans

S. Dublin can cause severe disease in humans often requiring hospitalization and it can be life-threatening. Young, old, and immunocompromised people are at highest risk. It is transmitted to humans through contact with infected animals or contact with a contaminated environment.

For any concerns about human health, contact your health care provider or local public health unit.

## Clinical Signs of Disease in cattle

- Sudden death in calves with no previous symptoms
- Respiratory disease that does not respond to typical treatments
- Loss of appetite
- Fever
- Diarrhea
- Arthritis
- Neurological symptoms
- Abortions or diarrhea in adult cows

## Report cases to the Chief Veterinary Office

S. Dublin is a **notifiable disease** in NS. Cases must be reported to the Chief Veterinary Officer at the Nova Scotia Animal Health lab through email at [AnimalHealthLab@novascotia.ca](mailto:AnimalHealthLab@novascotia.ca) or by phone call to (902) 893-6540. You will be contacted by Nova Scotia Department of Agriculture to discuss best management and control measures for your herd.

## Recommended Biosecurity Measures

Prevention and control are best achieved through appropriate biosecurity measures. These measures will protect you and your herd from S. Dublin and other common cattle diseases.

### Take care with new animals

The most common source of disease is from new or returning animals:

- Ensure new animals are sourced from disease free herds
  - Contact your veterinarian for more information on testing
    - Herd status must be determined by herd level testing
    - Individual animal testing may be done but has limitations
- Be aware that S. Dublin and some other disease can be present in apparently health animals with no history of disease

### Quarantine new or returning animals

This helps prevent many diseases. Note that animals with S. Dublin may not have clinical signs even through a quarantine period and may still be a risk.

- Quarantine new or returning animals for 2 to 4 weeks before mixing with your herd
- Quarantine in a separate building to prevent direct cow-cow contact
- Observe cattle for abnormal behavior
- Handle and tend to quarantined cattle last using separate clothing and equipment

## Monitor cattle health

Contact your veterinarian if you observe any of the following:

- Rapid, unexplainable mortalities
- Respiratory illness in young calves that is not responding to typical treatments
- Increased abortion rates

Dead cattle may be submitted to the NS Animal Health Laboratory for post-mortem examinations.

### **Nova Scotia Animal Health Laboratory**

Hancock Veterinary Building (Dalhousie Agricultural Campus)

65 River Road, Bible Hill,

Nova Scotia B2N 2P3

Tel: (902) 893-6540

Email: [AnimalHealthLab@novascotia.ca](mailto:AnimalHealthLab@novascotia.ca)

## Calf management

- Reducing calving season to decrease period of heaviest bacterial shedding (beef cattle)
- Separate calves directly after calving to decrease chances of exposure
- Avoid feeding unpasteurized milk

## Manage risk through workflow

- Work with youngest animals first
- Handle sick or quarantined cattle last

## Feed and Housing

- Obtain feed and water from reliable sources
  - Clean and disinfect water and feed equipment regularly
- Ensure clean, dry bedding, and diligent manure management
- Control pests

## Manage risk caused by equipment

- Do not share equipment with other farms.
- Regularly clean and disinfect equipment that encounters cattle specifically if it is moving between different age groups.

## Maintain personal hygiene

- Use dedicated clothing and footwear for working around the herd
- Wash hands thoroughly before and after working with the herd
- Avoid touching your face, eyes, mouth or nose with dirty hands



## Restrict access to your herd

- Post biosecurity signs
- Restrict access from visitors
- Reduce contact with neighboring herds and avoid sharing fields
- Ensure that necessary visitors or service personnel wear clean footwear and coveralls

## Keep accurate records

- Source of cattle
- Health concerns
- Changes (acquisition of new cattle, new feed, sale of animals, etc.)

## Follow a biosecurity plan

- Create a biosecurity plan
- Update your plan regularly

## Register with the Nova Scotia Premises ID program

This is a free program for all livestock owners. The program allows for traceability information to be accessed quickly for the protection of animal and public health.

More information on this program can be found at

<https://novascotia.ca/agri/programs-and-services/industry-protection/PID/>

