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## Farm Information Sheet

### Salmonella Dublin

#### What is Salmonella dublin?

Salmonella dublin is a bacterial infection of cattle found mainly in Wales, South West and North West England. It causes severe diarrhoea, which can be fatal in cattle of any age. It is a common cause of abortion in adult cattle and pneumonia, septicaemia and death in baby calves. Infections in people can result in serious illness.



#### How is it spread?

Infection is usually through contact with other animals but can be from the environment. The bacteria are passed in enormous numbers in the faeces of infected cattle – 100,000,000/g dung. They can survive in water and soil for up to nine months. The disease is difficult to eliminate from a herd because some cows become carriers. These animals appear healthy but the bacteria continue to live in their liver, gall bladder and tonsils. They only excrete Salmonella in their faeces intermittently and this makes them difficult to detect. They excrete bacteria at times of stress, particularly at calving.

Adult cows are usually fairly resistant to disease but concurrent problems (such as liver fluke, mastitis, BVD and extreme weather) increase the chance of disease in adults.

#### What are the signs?

**CALVES:** Calves can be infected within minutes of birth if the dam is excreting Salmonella in her faeces. Colostrum does not provide good protection as it only contains small numbers of antibodies against Salmonella. With overwhelming infection calves can collapse and die within 24 – 48 hours and diarrhoea will not be seen. But usually they become ill at 2 – 3 weeks and are dull, anorexic, have a high temperature and foul diarrhoea that may contain blood. They may just show signs of pneumonia.



#### What are the signs?

**COWS:** Cows often become ill around calving. They are dull and off their feed with a high temperature and severe scour. Abortion can occur when the cow is ill but most often occurs on its own with no other signs. Without treatment cows and calves become dehydrated and die in 3 – 5 days.

Once recovered, cattle can pass Salmonella in their faeces for many weeks. Affected adults become carriers and a potential source of infection to the rest of the herd. Calves do not usually become carriers.

#### How is it diagnosed?

Salmonella can be isolated from faeces, post mortem samples and aborted calves.

Once diagnosed, the lab must by law report incidents to DEFRA and the local health authority.

#### What is the treatment?

Treatment is with antibiotics and fluids. Luckily there is little antibiotic resistance to Salmonella dublin. (Salmonella typhimurium is resistant to many antibiotics.)

#### How should it be controlled?

It is important to try and limit further spread to cattle and people by doing the following

1. Isolate cases – place disinfectant at the door, use separate overalls and wash hands after handling.
2. Do not drink raw milk – inform the dairy company and discard milk from affected cows.
3. Reduce stocking density – do not put new calves into an affected building.
4. Steam clean and disinfect calving boxes and calf pens between animals.
5. Vaccination. Bovivac S protects against Salmonella dublin and Salmonella typhimurium. Although the vaccine does not stop the disease occurring, it reduces the shedding of Salmonella by carrier cows and therefore reduces the overall infection load on the farm
6. Check for fluke and treat if necessary.
7. Look for and cull carrier cows.
8. Slurry storage - Slurry should be stored for at least 4 weeks and land should not be grazed for 4 weeks after spreading. This should be increased to 6 months if young stock are to graze it. Salmonella does not live for long in hay and is killed in silage.
9. Quarantine all bought in stock for 3 weeks and faecal sampling but this may not detect all carriers.



This information is also available from our web site at [www.highgate-vets.co.uk](http://www.highgate-vets.co.uk)