

SALMONELLA CAN BE CONTROLLED

By Russell Schnepper, DVM

Salmonella is usually thought of as producing scours, which it usually does, but *Salmonella dublin* can also cause very acute pneumonia and is highly contagious. Dublin is aerosolized, whereas *Salmonella typhimurium* is spread by contact with the feces and does not ordinarily spread through the air, unless it is aerosolized in the process of pressure washing. Salmonella can be spread by contaminated trucks and facilities, as well as carrier animals. A recovered calf may shed Salmonella for a year.

Whole cell Salmonella bacterins are usually ineffective. Many isolates have been *S. typhimurium var Newport*, but there are many serovars of salmonella and I do not think cross protection occurs. Endovac bovi provides protection against the endotoxins the salmonella produces rather than antibodies against the many individual serovars.

Salmonella are very hard to clean up in the calf's environment. I like to take another approach. Clean up as well as possible. Be all in and all out in the facility. Inject 1 ml of Immunoboost. Use Immvac's Endovac bovi (1 ml is adequate dose) upon arrival and repeat it 10 to 12 days. If *S. dublin* is causing a respiratory problem, give a 3rd injection of Endovac at weaning. Feed Gammulin at an ounce per calf per feeding for 10 days, then ½ ounce per feeding for another 7 days, then wean off the Gammulin over a period of three days. The cultures I have done, show a *S. dublin* that is resistant to all antibiotics except Nuflo. If you feed neomycin, tetracycline, Apralan, sulfas, etc. the

Salmonella infection becomes more acute. You are merely killing off the friendly "bugs" in the gut, leaving no competition for the antibiotic resistant Salmonella, which multiplies unabated.

Salmonella Prevention:

1. Inject Immunoboost day one, and repeat day eight in severely challenged barns.
2. Inject Immvac's Endovac-bovi (1 ml) day one and repeat on day eight.
3. Feed Gammulin for 21 days.

Salmonella Treatment:

1. Inject Immunoboost at first sign of illness.
2. Feed water and electrolytes between regular milk feedings. (Removing milk may starve out the Salmonella, but it also starves the calf.) We have had success substituting "Hydrafeed" (A French made electrolyte that effervesces and is extremely palatable) for one or two milk feedings.
3. Continue with Gammulin.

Nutrition is extremely important. The calf's immune system can't respond to the vaccine, nor protect itself from the pathogens, if deficient in Selenium and Vitamin E.

REMEMBER, SALMONELLAE ARE EVERYWHERE AND ARE OPPORTUNISTS, READY TO JUMP IN ANYTIME THE CALF'S IMMUNE SYSTEM IS COMPROMISED.