

# Practitioners Experience with *Mycoplasma bovis* Outbreaks – Dairy Calves

Jan C. Gawthrop, DVM

CalfCare, 11544 N. State Road 13, North Manchester, IN 46962

## Abstract

*Mycoplasma bovis* infection in dairy calves is a very common problem that requires all the common principles of good medical management. Reduce exposure, detect early, treat properly, feed and house optimally and vaccinate if necessary. More knowledge on management of this disease is surely needed.

## *Mycoplasma bovis* in a Calf Practice

My practice is devoted to young calves, basically the first five months of life. There are many different management issues we have to confront, but one of the worst is *M. bovis* infections.

My patients come from dairy farms directly to the calf raiser, or they arrive at the calf farm after passing through calf dealers. The calves are raised on small family farms in groups of 25 to 200 in a calf facility. Typically, calves arrive as a group and leave as a group. They are housed in individual pens and fed milk replacer or waste milk. Starter grain, usually 20% to 23% protein, is offered early.

Clinical signs of *M. bovis* infection will appear at around 14 days of age. Appetite and attitude will be normal except in the later stages of the disease. The first sign is slight lacrimation. In a day or two, one or both ears will start to droop at rest and eventually stay in a down position all the time. The calf will also show nasal discharge and may have a slight cough. If left undetected and untreated at this point, the condition will persist for several weeks with a good chance for chronic pneumonia and/or arthritis.

The incidence of infection is high in calves that have been fed non-pasteurized waste milk or were fed contaminated colostrum. Also, the infection can spread horizontally. High moisture in the environment will increase the incidence and severity of *M. bovis* infection. Late winter and early spring are the seasons with highest incidence because of frequent precipitation and because barns are not open enough to allow sufficient air exchange.

We could have better control of this disease if we could positively influence management on dairy farms,

especially regarding administration of colostrum and sanitation of colostrum and milk. Since there is often little communication between the calf man and the dairyman, we have to play catch-up to control the disease. We give oxytetracycline or lincomycin in the milk routinely. Treatment of individual cases is successful if detection is made early. Calves must be observed when it is not feeding time. If the first recognition of an ear droop is at feeding time, the caretaker is two days late in his/her detection. Micotil or long-acting oxytetracycline is the drug of choice. Just as early detection is important in treatment success, so is long duration of treatment. We like to keep therapeutic levels of antibiotic present for seven to 10 days.

It is necessary to manage the environment to prevent infection with *M. bovis*. Bedding needs to dry, and air needs to be fresh. Direct air on the calf should be avoided; air over the top of the calf is ideal.

Population dynamics can help control the incidence. Calf operations or dairies that constantly add new animals to a facility will have a difficult time managing an outbreak. Young calves should not have exposure to calves that are three to eight weeks old. Swine practitioners advise their clients to practice all in/all out population dynamics; our clients need that same advice.

We use *M. bovis* bacterins routinely. The benefits we see are not dramatic. There may only be a slight reduction in the number of acute cases. There will be a noticeable reduction in chronic pneumonia and arthritis. We give a series of vaccinations in the first two to three weeks of life. In addition, we give another series at two to three months of life.

Despite having too much experience with *M. bovis* infection in young calves, we don't have nearly enough answers to the problem. In summary, start with clean, strong calves and keep them that way. Avoid contamination from colostrums and milk. Detect early, treat early and treat long. Give the best environment possible. Keep breaking the cycle of the disease with facility emptying and disinfection. When other control measures fail, vaccinate young calves while on milk and repeat another series when they are older. Encourage experts to keep looking for answers.