

# MYCOPLASMA PNEUMONIA in Central Oregon Calves

## The Problem

There has been a great deal of concern among cattlemen in the last few weeks over cases of *Mycoplasma pneumonia* in calves. While *Mycoplasma* can indeed cause serious losses under certain circumstances there is really nothing “unusual” going on in Central Oregon cattle. It seems that *Mycoplasma* is a new term to many cattlemen and “fear of the unknown” has led to a near panic situation among some producers.

## What are *Mycoplasma*?

*Mycoplasma* are a class of very small bacteria that are unique in that they do not possess a cell wall like other bacteria. This lack of a cell wall is what makes diseases caused by *Mycoplasma* so difficult to treat successfully. There are over 20 species of *Mycoplasma* and even more “types”. Most species are considered opportunists. This means that *Mycoplasma* play a secondary role in disease. Most *Mycoplasma* species are part of the population of bacteria commonly found in the respiratory tract of normal animals. The inciting cause of disease (pneumonia or bovine respiratory disease complex) is usually a virus such as IBR, BRSV, or BVD alone or in combination with bacteria such as *Pasturella* and *Mannheimia*. Sometimes calves persistently infected with BVD eventually succumb to *Mycoplasma* due to a “weak” immune system.

There are a few species of *Mycoplasma* called *M. bovis*, *M. dispar*, *M. bovirhinis*, and *M. bovis genitalium* that are among the “nastier” types and may be able to cause disease without concurrent infection by other bugs. These species are NOT considered part of the normal bacterial population of cattle’s respiratory tract. However, to my knowledge, none of these species have been identified in cattle diagnosed with *Mycoplasma pneumonia* in Central Oregon.

## What type of illness does *Mycoplasma* cause?

*Mycoplasma bovis* can cause “calf pneumonia”, arthritis which often involves several joints in the same animal, ear and eye infections, and abortion. In most cases of “calf pneumonia” other disease causing organisms are also found in tissues of sick calves.

## What are the signs of *Mycoplasma pneumonia*?

The most prominent sign is coughing which is often set off by moving the animals around. This is why you are most likely to see coughing when calves are being loaded or unloaded or moved from pen to pen or through the sale ring at a public auction. Calves also have a mild fever

and may act depressed. In all but very severe cases they continue to eat well which is different from what is observed with most other types of pneumonia. Sometimes calves will be very lame from joint infections with *Mycoplasma*. The affected joints are warm and swollen. Calves may also have eye trouble resembling pinkeye or ear problems that cause the calf to walk with its head tilted to one side.

### **Is *Mycoplasma* on the rise?**

Experts from some of the larger cattle feeding regions of the country feel that *Mycoplasma* may be on the rise particularly in lightweight stocker and backgrounder calves. The apparent increase may be due to antibiotic resistance or to emergence of different strains but this is unproven. It appears that more cow-calf operations now have *M. bovis* in their herds than in the past. Cattle can carry *Mycoplasma* in their noses for months or even years.

### **When are cattle most likely to catch *Mycoplasma*?**

Although any age cattle can become infected, 350-450 pound calves are most frequently affected. When buying commingled, multiple-source calves the chances of getting *Mycoplasma* increases. The same is true when stockers are mixed with cow/calf pairs or when purchased replacements are added to a herd. Occasionally, replacement bulls can bring *Mycoplasma* into a herd. *M. bovis* is highly contagious and can rapidly spread through a pen. In most circumstances, coughing and pneumonia develop 3-4 weeks after arrival at a backgrounder or feedlot.

### **How do I know if my cattle have *Mycoplasma*?**

You will have to work closely with your veterinarian to diagnose any type of calf respiratory disease. A diagnosis can be established by a combination of taking a good history, performing a physical exam, and various diagnostic testing. Blood tests can give some indication of exposure to *Mycoplasma* and cultures from infected tissues can often positively establish the diagnosis. In order to determine which species of *Mycoplasma* is causing the problem additional testing at specialty animal disease labs is required. These tests are expensive and time consuming but since not all *Mycoplasma* are the same, it is often worth the effort to find out which one is causing trouble so a plan for control can be established.

### **How can we protect our cattle from *Mycoplasma*?**

Since the type of *Mycoplasma* we are seeing is an opportunist, the most important steps we can take will be those that raise the calf's resistance to infection. In other words, a complete preconditioning program including vaccination for common respiratory diseases (IBR, BVD, PI3, BRSV, *Haemophilus*, *Pasturella*, *Mannheimia*) before calves are moved through a sale or commingled with other calves. A good receiving diet with particular attention to insuring adequate mineral supplementation also goes a long way in preventing losses. Any stressful procedures such as castrating and dehorning can be delayed until the danger period for development of pneumonia has passed. When cattle known or suspected of being infected with *Mycoplasma* are moved out of a pen the feeders and especially the waters should be well cleaned out before new animals are brought in.