



Cattle vet Debby Brown, from Lancaster-based Advanced Nutrition, takes a timely look at health and welfare issues that are affecting dairy herds across the UK. Here she talks about an organism that can cause problems in both calves and cows and offers some advice on disease prevention and control.

Resistant organism is a threat to UK dairy herds

# Mycoplasma misery

**M**ycoplasma is what vets call a primary pathogen – it causes disease in otherwise healthy animals rather than just in those with a depressed immune system. I've seen a few cases during the past few months and every dairy unit presents with something different.

*Mycoplasma bovis* is the main strain that causes respiratory disease, mastitis and arthritis in UK herds and this is the most common pathogen found in cattle with chronic and unresponsive pneumonia and fatal bronchopneumonia. It is also linked to inflammatory lung lesions.

The good news is that, although it is found in healthy calves in infected herds, it's rarely found in healthy herds.

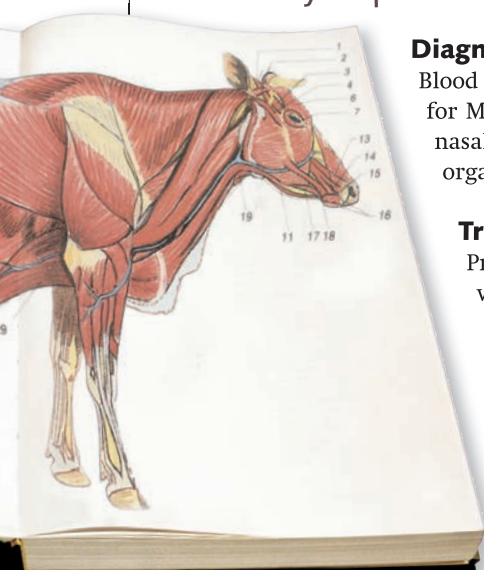
Some cattle show clinical signs, including a harsh hacking cough, low-grade fever, runny eyes, or ear droop. Others show signs of arthritis or joint inflammation with no apparent damage to the skin. Mastitis can also be caused by *Mycoplasma*. It is 'bought in' through infected animals and is spread – from animal to animal – by close contact. The organism can also be spread via milk or semen.

*Mycoplasma* is particularly worrying because it produces a biofilm around itself to protect it from 'stress' and antibiotics. The organism attaches to the host before colonising and adhering to the respiratory tract and the oral cavity of cattle.

*M. Bovis* is resistant to many antibiotics and avoids being attacked by the animal's immune system because it mutates rapidly.



## The encyclopaedia *Mycoplasma bovis*



### Diagnosis

Blood samples can be taken to check for *Mycoplasma Bovis* antibodies and nasal swabs can be taken to grow the organism.

### Treatment

Prolonged treatment is the only way to tackle it. Giving animals antibiotics on a metaphylactic basis – to eliminate or minimise an expected outbreak of disease – could be an option on some units where *mycoplasma* has been found. There are vaccines that will help to increase calf

growth rates and minimise lung lesions, but they need to be developed on an individual farm basis.

### Control

Early recognition, diagnosis and treatment are vital when cattle are infected. Cows with *mycoplasma* mastitis should either be culled or separated from the rest of the herd.

If milk from the herd is fed to calves, this should be heat treated to prevent the spread of infection to young stock.

### Prevention

Running a closed herd is preferable and, when buying in stock, make sure cattle are tested for the disease prior to purchase. Good ventilation will also help to reduce the spread of the disease in infected herds, as will low stocking density.