DISEASE DESCRIPTION:

Mycoplasma hyopneumoniae, commonly known as Mycoplasma pneumonia or Mycoplasma, is a widespread, chronic disease characterized by coughing, growth retardation, and reduced feed efficiency. The etiologic agent is a mycoplasma, a type of bacteria that lacks a cell wall. Mycoplasma pneumoniae is typically found in the upper respiratory tract of swine, where it causes a loss of ciliary motility and damage to the ciliated epithelium. This results in reduced mucus clearance from the bronchial passages, which contributes to the accumulation of respiratory secretions and the development of chronic pneumonia.

Transmission:

Mycoplasma pneumoniae is transmitted from sow to pig during lactation. Transmission can also occur through contact with infected penmates, as well as through the air. The disease is often introduced into a herd through new purchases of pigs. Once introduced, Mycoplasma pneumoniae can spread quickly through a herd, especially in crowded conditions and during times of stress.

Clinical Signs:

Clinical signs of Mycoplasma pneumoniae can vary in severity and may include persistent coughing, decreased appetite, weight loss, and stunting. Affected pigs may also exhibit a harsh, hacking cough, particularly at night or during exercise. The disease can lead to significant economic losses due to reduced growth rates and feed efficiency.

Diagnosis:

Diagnosis of Mycoplasma pneumoniae is typically based on clinical signs, history, and serological testing. Serological testing involves measuring the presence of antibodies against Mycoplasma pneumoniae in the blood. Antibody testing can be used to detect past infection or current exposure to the mycoplasma. Mycoplasma pneumoniae infection can also be diagnosed using polymerase chain reaction (PCR) testing, which can detect the presence of the mycoplasma's DNA in respiratory samples.

Treatment:

There is no cure for Mycoplasma pneumoniae. Treatment is primarily supportive, focusing on alleviating the symptoms and improving the overall health of the affected pigs. Treatment options may include antibiotics, nutritional support, and respiratory management strategies. Prevention is key to managing Mycoplasma pneumoniae, as it is often managed through vaccination and biosecurity measures.

Preventive Measures:

Prevention of Mycoplasma pneumoniae involves implementing biosecurity measures to reduce the risk of transmission. These measures include maintaining a clean environment, controlling access to the farm, and quarantining new pigs. Vaccination is an effective method to control Mycoplasma pneumoniae, and vaccines are available to protect against the infection. Vaccination can be done at any age, but it is commonly performed in the first 3 weeks of life to ensure effective protection against the disease.

Choosing Vaccines:

When choosing a Mycoplasma pneumoniae vaccine, it is important to consider the specific needs of the herd, the age of the pigs, and the potential for interaction with other respiratory pathogens. Vaccines may vary in their effectiveness and target populations, so it is crucial to consult with a veterinarian when selecting a product. In general, commercial vaccines are available that can be used for both prophylactic and therapeutic purposes, and they may be administered through various routes, including intramuscular injection and intranasal administration.