



# MAPLEVIEW

AGRI LTD.

## Respiratory Disease in Dairy Calves

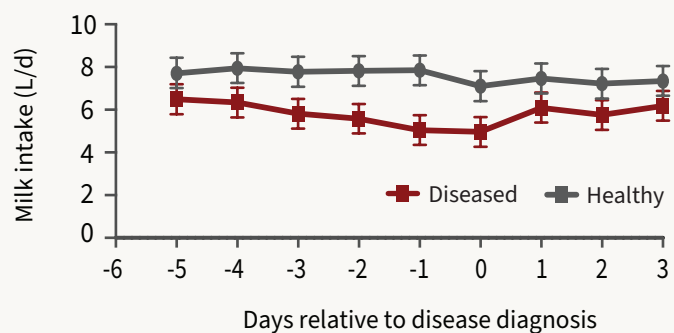
Most respiratory disease happens between 20 to 45 days of life, which is when to be on the lookout for symptoms.



### Drinking Behaviour

One of the first things to change as calves get sick is the amount of milk they consume or the speed at which they drink.

The figure on the right shows milk intake relative to disease diagnosis. The amount of milk consumed typically declines three days before onset of overt clinical signs of disease.

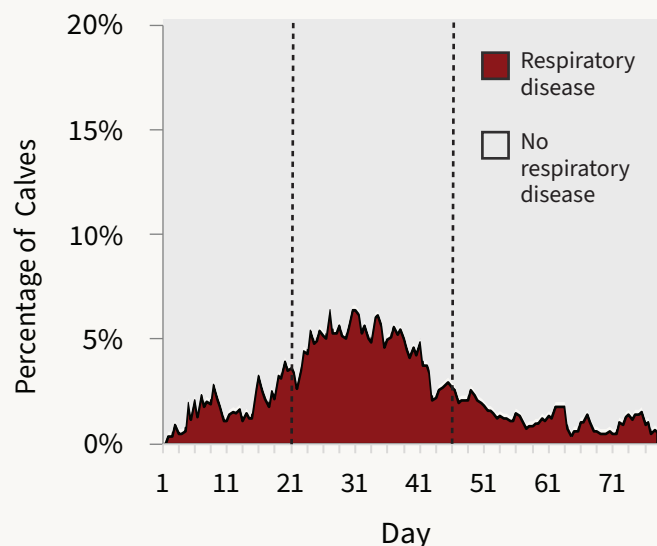


### Respiratory score

Using a combination of clinical signs is the best way to identify respiratory disease. The most important clinical signs to evaluate are:

- Elevated breathing rate
- Ear droop or head tilt
- Spontaneous cough
- Discharge from the nose
- Elevated rectal temperature
- Discharge from eyes

The figure on the right shows daily respiratory scoring data from ~1,000 calves at Mapleview research facility. Calves having a score of 5 or more were diagnosed with respiratory disease.



# Common Respiratory Pathogens

- Bacterial Pathogens**
- *Mannheimia hemolytica*
  - *Pasteurella multocida*
  - *Mycoplasma bovis*
  - *Salmonella Dublin*

- Viral Pathogens**
- Bovine Respiratory Syncytial Virus (BSV)
  - Infectious Bovine Rhinotracheitis (IBR)
  - Parainfluenza Virus 3 (PI3)
  - Bovine Viral Diarrhea Virus (BVD)

# Prevention of Respiratory Disease



## Colostrum

**Quantity:** Feed **200 g of IgG or 4 L of colostrum at first feeding** and provide a second colostrum feeding. Don't forget about feeding it quickly and minimizing bacterial contamination.

**Quality:** Ensure colostrum has **at least 50 g / L of IgG** by measuring with a Brix refractometer (22% or greater on Brix = 50 g or more of IgG per L of colostrum).



## Vaccination

Vaccines are available for most pathogens causing respiratory disease. **Intranasal vaccines are most effective in early life** as they are not affected by maternal antibodies from colostrum.



## Environment

**Bedding:** **Clean, dry bedding** is critical to reduce levels of ammonia and humidity. In winter, **long straw bedding** can help prevent calves from being chilled, which has been shown to reduce respiratory disease.

**Stocking density:** For preweaned calves, it is best to have a **space allowance of at least 35 ft<sup>2</sup> per calf**. In the preweaning period, keeping group sizes to **10 or fewer calves** has been shown to reduce respiratory disease.

**Ventilation:** Delivering fresh air to calves without causing a draft reduces risk of disease.



## 8L<sup>+</sup> Nutrition

Providing at least **8 litres/ day of high quality milk or milk replacer** has been shown to reduce disease, increase growth and improve feed efficiency.

# Treatment of Respiratory Disease



## Antibiotics

**Most cases of respiratory disease require antibiotics**, whether the infection was caused by a bacteria or a virus (which can make the calf more susceptible to having a secondary bacterial infection).



## Inflammation & Pain

Calves with respiratory disease often have fever and inflammation because of the infection. Discuss this with your veterinarian, **including how to use non-steroidal anti-inflammatories to manage inflammation and body temperature** in calves with respiratory disease.

**Work with your veterinarian to develop protocols to prevent and treat respiratory disease and reduce its impact on your farm.**

