Grain-fed veal fact sheet: Mycoplasma

Introduction

The goal of a grain-fed veal farmer is to achieve the desired finish on veal cattle at the right weight and age. Ideally, market-ready grain-fed veal cattle should weigh between 295 to 320 kg (650 to 705 lb.) at 28 to 32 weeks (seven to eight months) of age. To achieve this goal, it is critical to have the right feed rations and ratios.

Veal is defined as cattle of any dairy breed or dairy crossbreed dressing no more than 190 kg (419 lb.). This converts to a live weight of roughly 349 kg (769 lb.), which is reached at approximately eight months of age. Producers are strongly encouraged to target a dress weight of 180 kg (397 lb.) to maintain some flexibility within the system to manage veal carcass weights.

- Average daily gain (ADG) should be 1.2 kg (2.6 lb.) or better. Targeting daily gains above 1.5 kg (3.3 lb.) may require additional nutrient requirements.

Grain-fed veal cattle are fed a balanced ration based of grain (usually clean, whole-shelled corn) and pellets made of protein, vitamins, and minerals. A small amount of fibre should be offered daily to maintain rumen health. Cattle should also have continuous access to their feed, to encourage slower eating and stimulate chewing. Ensure there is adequate bunk space for each animal.

What is *Mycoplasma Bovis?*

Mycoplasma bovis (M. bovis) refers to a group of bacteria that can infect cattle. Unlike other bacteria, M. bovis lacks a cell wall, making it resistant to many common antibiotics. This unique feature makes it harder to treat infections caused by M. bovis.

How does it affect calves?

M. bovis can cause various health problems in dairy calves, including:

1. **Respiratory issues:** The most common symptom is pneumonia. Infected calves may have difficulty breathing, cough, and nasal discharge
2. **Joint infections:** Calves may develop swollen joints, leading to lameness and difficulty moving
3. **Ear infections:** Infected calves might have droopy ears, head tilts, and ear discharge

M. bovis is particularly important as it causes chronic respiratory disease and arthritis in dairy calves. It is a key player in bovine respiratory disease complex (BRD) and chronic pneumonia and polyarthritis syndrome (CPPS). CPPS is responsible for 25 to 40 per cent of beef feedlot calf mortality and has surpassed shipping fever as the leading cause of death loss in high-risk fall-placed feedlot calves in Canada.

How does it spread?

M. bovis spreads through direct contact with infected animals or contaminated equipment. It can also spread through airborne droplets when infected animals cough or sneeze. Calves are particularly vulnerable during stressful periods, such as weaning or transportation, when their immune systems are weakened.

Recognizing the symptoms

Early detection is crucial. Monitor for the following signs:

- Coughing and nasal discharge
- Laboured breathing
- Swollen joints or lameness
- Head tilts and ear discharge
- Poor growth and weight gain

If any of these symptoms are noticed, it is important to act quickly to prevent the spread of infection.

Diagnoses

The herd veterinarian can diagnose M. bovis using laboratory tests, usually by taking a nasal swab from an affected calf. Polymerase chain reaction (PCR) tests are now available, which can detect M. bovis within hours. A PCR test identifies genetic material from the pathogen, making it a fast and accurate diagnostic tool. This quick and precise diagnosis is key for effective treatment.

Treatment and prevention

Treating M. bovis can be challenging due to its resistance to many antibiotics. Some antibiotics can still be effective, and supportive care such as anti-inflammatory medications and good nutrition can help improve recovery. Consult with the herd veterinarian for the best course of treatment based on the specific type and severity of the infection.

Prevention is crucial. Implement strong biosecurity measures, maintain high standards of hygiene, and minimize stress during critical periods. Recently, a new vaccine specifically targeting M. bovis in calves has become available. It is the first and only modified live bacterial vaccine against respiratory disease caused by M. bovis. It is worth discussing this option with the herd veterinarian to learn more.

Monitoring and management

Regular monitoring is key to early detection and effective management of M. bovis infections. Keep detailed records of symptoms, treatments, and outcomes. Work closely with the herd veterinarian to develop a herd health plan tailored to the farm's specific needs.

Conclusion

M. bovis is a challenging but manageable threat to dairy calf health. Understanding the symptoms, working with the herd veterinarian, and implementing strong biosecurity and management practices can protect calves and maintain a healthy, productive herd. Early detection and prevention are the best tools in the fight against M. bovis.

For more information:

As part of your research into starting a grain-fed veal farm, you are encouraged to talk to experienced veal producers, visit their farms (while following strict biosecurity protocols), and attend industry events and meetings. No two veal farms are the same and a lot of valuable information will be learned from each visit and event.

Find VFO producer resources here: https://vealfarmers.ca/producer-information/resources/

Find the *Code of Practice for the Care and Handling of Veal Cattle* here: https://www.nfacc.ca/codes-of-practice/veal-cattle

Find Ontario Ministry of Agriculture, Food & Agribusiness veal resources here: https://www.ontario.ca/page/veal-farming

References available upon request.

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