How to manage diarrhoea in Dairy Calves

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Calf scours have been a problem in the dairy industry since time immemorial. Of all the calves born annually 8-10 percent die before the weaning age. Research figures indicate that in Zimbabwe, 35-50 percent of all calf deaths are caused by scours and this is a heavy blow to the country's dairy sector which has is struggling to make a comeback in the recent past. Calf scours result chiefly from pathogenic invasion of the gastro-intestinal tract (GIT) even though sometimes dietary changes and stress might also lead to scouring. In order for a farmer to take timeous corrective measures in the event of a case of scours there is need for one to be able to decipher precisely the nature of infection that the calf will have contracted by sheer scrutiny of the faecal matter. That is essential in enabling one to seek the appropriate remedies in a manner that could save the calf. Hereafter is a rundown of the major diseases (not all) that cause scours, their symptoms, signs, preventive measures and treatment procedures.

Bacteria

When you notice a calf aged between 1 day -3 weeks presenting a profuse watery of lightly pasty diarrhoea which smells awful with a characteristic white-yellowish colour and visible chunks of partially digested milk suspect a case of **Colibacillosis**. This is a disease caused by bacteria and it is usually known as '' white scours '' in dairy circles. This is a very serious disease because it results in rapid dehydration such that death can result in 5 days or less. In order to prevent the occurrence of colibacillosis farmers are encouraged to vaccinate pregnant cows against the disease 4 weeks before calving. In addition to that colostrums should be fed to the calves at birth because recent studies have shown that a delay of just four hours can be fatal. In the event that colibacillosis has been detected in your herd, quickly isolate the affected calves and halt milk feeding for 1 day and replace with electrolyte solutions. Administer broad spectrum antibiotics by way of intramuscular injections for 3-5 days. Alternatively dose with broad spectrum antibiotics and sulphonamides by mouth a but be careful not to exceed 3 days on this treatment plan.

If a calf aged between 3-6 weeks has diarrhoea in form of a putrid, profuse fluid, yellowish in colour tinged with blood, mucus and some pieces of intestinal lining then suspect a disease called **calf parathyphoid**. This disease which is also known as **salmonellosis** is caused by bacteria and has the capacity to cause death within 24 hours. Owing to the fact that calf parathyphoid can kill within a short space of time it is highly recommended to prevent rather than an attempt at curative approaches. Prevention is achieved by vaccinating the cows a month before the expected date of calving and also vaccinating the calves at two weeks of age. Treatment of salmonellosis is achieved by giving huge doses of broad spectrum antibiotics supported by sulphonamides as prompt as possible after noticing first signs of ill-health. Meanwhile electrolyte solutions should dosed orally time and again in order to eschew mortality due to dehydration.

Another calf disease that manifests as scours is **enterotoxaemia** which is caused by bacteria. It strikes calves between the ages of 7-10 days and can be identified by blood stained diarrhoea and the calf shows obvious signs of severe stomach discomfort. This disease is fatal and can result in sudden death in very young calves. As such farmers need to vaccinate their pregnant cows against enterotoxaemia 6 weeks before parturition and revaccinate two weeks before calving. Vaccination for enterotoxaemia should be done annually thereafter. Owing to the fact that this disease can affect mortalities within short space of time, attempting to treat severe cases does usually yield positive results. However in less acute cases one can treat enterotoxaemia by administering antibiotics orally in combination with penicillin intramuscular injections.

Viruses

There are cases where a calf produces watery mucoid faeces often accompanied by blood. Check if the calf is feeding normally and if it shows signs of displeasure or reluctance to feed check for ulcers in the mouth as well as any respiratory challenge as indicated by an abnormal nasal discharge and or coughing. If such signs are shown by a calf between the ages of 6-24 months then suspect that your animals have contracted a disease called **Bovine Viral Diarrhoea**. This disease spreads easily via contact with contaminated faecal matter and nasal discharge. Prevention can be effected by vaccinating cows a month before service and calves upon reaching the age of 6 months.

Another troublesome viral disease of young animals that manifests as diarrhoea is the **Rota-viral** infection. Rota viral infection is characterised by profuse liquid diarrhoea, pale yellow in colour with evidence of mucus and at times some flecks of blood. This normally strikes calves between 5-14 days of age. There is another virus called **corona virus** that affects calves in exactly the same way as the Rota virus. The symptoms are more or less similar the only notable difference being the degree of severity. Corona viral infection is more severe and deadlier than rota virus. To prevent the occurrence of these viral diseases it is imperative that farmers vaccinate their cows against these diseases 4 weeks before calving and the calves should be vaccinated at birth. They should also ensure a daily dose of colostrum for about a week.

Protozoa

It is not only viruses and bacteria that cause scouring in calves, protozoa do also. In Zimbabwe the most common protozoal disease that results in diarrhoea is **coccidiosis**. Calf coccidiosis is common in calves aged between 1-12 months. It remains one of the most important diseases of weaned calves whose major sign is severe foul smelling bloody diarrhoea with lots of mucous. Death can occur within 4-10 due to dehydration and invasion of secondary infections such as pneumonia. In order for a farmer to prevent this disease it is prudent that strict hygiene be observed at all times as well as avoiding raising the calves under crowded, moisty and stress-ridden conditions. In the unfortunate event that coccidiosis has occurred one can attempt to treat the affected calves using a drug called sulphadimidine. This drug is added to feed at the rate of 35mg/kg and fed for a maximum of 15days. Meanwhile dose the calf with electrolyte-rich fluids to ameliorate dehydration.

You might have noticed that in all cases there was the mention of the need to dose all sick calves with electrolyte solutions. This is meant to restore the water and electrolytes that would have been unceremoniously lost through the diarrhoea. One could have been left wondering where to get such fluids. Whilst there are commercially prepared electrolyte packs available on the market it is

important to note that you can prepare your own solution to mitigate against the cost of treatment as enshrined below:

1 cup glucose

1 teaspoon common salt

1 teaspoon bi-carbonate of soda

¼ teaspoon potassium permanganate

2 litres of water

Conclusion

In order to win the battle against calf scours it is important for farmers to stick to the stipulated vaccination procedures at all times. Moreover the observation of strict bio-security measures, ensuring an environment which is sanitary and free of stress factors is also important. The ingestion of colostrum is also very vital especially when taken as soon after birth as possible has always been seen to be fundamental in prevention of scours.

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