

DiaCare pill for calves

Calf mortality due to diarrhoea

Diarrhoea in young calves is a major worldwide problem. A few facts at a glance:

- In the Netherlands, on average 12.5% of the calves die in the period from birth to the age of 14 days;
- Diarrhoea is the leading cause of death (56%) for young calves until weaning. Sometimes diarrhoea is caused by feeding errors. But, usually, it is caused by one or a combination of four infectious organisms, the bacterium *E. coli*, rota and corona viruses, and the single-celled parasite *Cryptosporidium parvum*. In recent years, cryptosporidiosis has been increasingly reported as a cause of diarrhoea, and usually causes diarrhoea symptoms around the 11th to the 15th day of life. Cryptosporidiosis often occurs after - or in combination with - a Rota infection;
- *Cryptosporidium* is very difficult to control because the parasite does not respond to antibiotics. After excretion through the manure, the parasite can survive for a long time, in a stable environment.

Cooperation between Dutch and German companies

A group of four Dutch and German companies sought cooperation in 2017 in order to reduce diarrhoea problems in young calves by natural means. This unique collaboration has led to the development of the DiaCare pill for young calves.

Unique features of the DiaCare pill:

- The DiaCare pill is a dietary supplement composed of natural raw materials that:
 - Support and improve the calf's immune response to the cryptosporidiosis parasite;
 - Reduce fluid and nutrient loss;
 - It is a slow release pill. The active components from the pill are gradually released into the digestive tract of the calf. This makes the product active in the gastrointestinal tract for a longer period and hence, more effective;
 - The pill is small and can easily be administered orally via a pill-gun.

Practical experiments with calves in Germany and The Netherlands

In 2018 and 2019, many dairy farms in Germany tested the DiaCare pill with good results. All dairy farmers involved have indicated that they wish to continue using the product.

Application of the DiaCare pill

- 1 pill per calf per day for four consecutive days



DiaCare pills



Pill shooters

Results of DiaCare used for calves with diarrhoea on dairy farms in The Netherlands and Germany



Followed test procedure

1. For calves with clearly abnormal manure / diarrhoea:
 - Perform rapid test (diagnosis of Cryptosporidiosis, E. coli, Rota and Corona virus)
 - Treat calves with 1 DiaCare pill per calf per day for 3-4 consecutive days, insert pill with pill shooter in the back of the mouth
 - Calves older than 10 weeks; insert 2 pills for 3-4 days
2. On the day after the last treatment, assess the manure quality and condition of the calf



Results of tests with calves on 6 dairy farms

Dairy farms	Age of calf	Diagnosis	DiaCare use	Conditon calf after using DiaCare
Farm A	< 14 days	Cryptosporidium	1 pil/day during 3 days	No diarrhea
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Farm A	< 14 days	Cryptosporidium	1 pil/day during 3 days	No diarrhea
Farm B	< 14 days	E-coli and rota virus	1 pil/day during 3 days	No diarrhea
Farm C	5 months	Coccidiosis	2 pills/day during 4 days	Diarrhea
Farm D	< 14 days	E-coli and rota virus	1 pil/day during 3 days	No diarrhea
Farm E	< 14 days	E-coli and rota virus	1 pil/day during 3 days	No diarrhea
Farm F	10 weeks	Coccidiosis	2 pills/day during 3 days	No diarrhea
Farm F	12 weeks	Coccidiosis	2 pills/day during 4 days	No diarrhea
Farm F	5 months	Coccidiosis	2 pills/day during 3 days	No diarrhea