

Crypto bolus



Supplementary feed

Animal species calves

Article number 102043

Content
Capsule 10 pieces x 3 g
Bolus 20 pieces x 10 g

Article number 102073

Content
Capsule 25 pieces x 3 g
Bolus 50 pieces x 10 g

GMP+ FSA-assured
GMO controlled
PDV103322

Cryptosporidiosis in calves

Cryptosporidiosis is caused by *Cryptosporidium* spp. The most common species is *C. parvum*. Dutch research (2007) has shown that *Cryptosporidium parvum* is found on 57% of Dutch farms¹. Other research has revealed that *Cryptosporidium* spp. are (partly) responsible for 60% of cases of diarrhoea². Cryptosporidiosis is a widely spread health issue, whereby the infection pressure can increase fast. Calves may be infected through adult carrier animals, e.g., shortly after birth³.

Symptoms

The most important sign is watery diarrhoea, in which slime and blood may be present. Other possible symptoms include lethargy, decrease in appetite, weight loss and dehydration. The symptoms are worse when *C. parvum* coincides with other pathogens, like Corona or Rota viruses, or *E. coli*⁴, but also in cases where only *Cryptosporidium* is present, severe symptoms may occur⁵.

The parasite adheres to the villi of the gut epithelium, resulting in villus atrophy, leading to a decrease in enzyme activity, and increased risk of inflammation. The damaged villi open the gate to secondary infections (gate-way effect). Other consequences include shortening of villi and decreased absorption capacity, e.g., for Vitamin A⁶.

Cryptosporidium parvum infections are predominantly seen in calves between one and four weeks of age. Although Cryptosporidiosis is usually not life threatening for calves, it often hampers daily gain and future production performance.

Many factors affect the development of Cryptosporidiosis, of which poor hygiene is the most important. Attention for good hygiene is crucial to prevent Cryptosporidiosis in calves. Also, a high health status is important to ensure that animals are capable to withstand infection pressure.

Topro Crypto bolus

The Crypto bolus has been developed to improve the immune status of the calf in the first weeks of life, thereby preventing the risk of damage and infections in the digestive tract. This bolus consists of well balanced essential oils based on allicin and eugenol. These ingredients exhibit strong antimicrobial properties, and are also active inhibitors of inflammation. The bolus is active for 14 days.

Composition

CAPSULE & BOLUS

Gelatine (Capsule), Magnesium oxide, vegetable fats of rape seed, Calcium stearate.



Crypto bolus

Additives

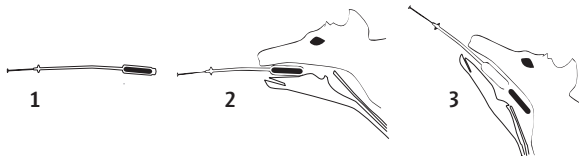
Mixture of sensory additives.

Dosage

1 Capsule, administer at the fourth day of life and 2 Boluses, administer at fourteenth day of life.

Directions for use

Administer with an appropriate bolus applicator.



Storage advice

Store at a cool and dry place, keep out of reach of children. Protect from frost.

Product characteristics

Essential oils based on Allicin and Eugenol	Proven antimicrobial activities against yeasts, fungi, bacteria, viruses and protozoa. Anti-inflammatory. Improves the immune status of the calf.
Bolus	Easy to administer, guaranteed uptake.

References

1. Bartels, C.J., et al., *Prevalence, prediction and risk factors of enteropathogens in normal and non-normal faeces of young Dutch dairy calves*. Prev Vet Med, 2010. 93(2-3): p. 162-9.
2. Meganck, V. *Cryptosporidium parvum* bij het kalf. [cited 2016 09-08-2016]
3. Hotchkiss, E., et al., *Update on the role of cryptosporidiosis in calf diarrhoea*, in Livestock. 2015. p. 2-6.
4. Göhring, F., et al., *Co-infections with Cryptosporidium parvum and other enteropathogens support the occurrence and severity of diarrhoea in suckling calves [Abstract]*. Tierärztliche Umschau 2014. 69(4): p. 112-120.
5. Shobhamani, B., et al., *Cryptosporidiosis in calves with other concurrent infections [Abstract]*. Journal of Parasitic Diseases, 2005. 29(2): p. 161-163.
6. Holland, R.E., et al., *Malabsorption of vitamin A in preruminating calves infected with Cryptosporidium parvum [Abstract]*. Am J Vet Res, 1992. 53(10): p. 1947-52.