Stay on the performance track!

BOVILIS® Rotavec® Corona

Halocur

THE UNIQUE COMBO THAT CONTROLS NEONATAL DIARRHEA

MSD Animal Health

Bovilis® Rotavec® Corona Halocur

The Five Step Program

Keeping herd performance on track means preventing and controlling neonatal diarrhea. Evaluating herd and farm management practices, properly diagnosing pathogens and analyzing colostrum quality and intake are essential steps in resolving this costly problem. Selecting the right prevention / treatment protocol is also critical to success.

> STEP 1

ASSESS PROBABLE CAUSES OF SCOURS

In the process of investigating a case of neonatal diarrhea on a farm, a thorough discussion with the cattle producer about farm calf management and type of animals affected can already identify a list of possible causes of the scour problem.

Key areas for discussion

- Age of the animals affected
- Colostrum Management
- Calf feeding protocol
- Housing conditions
- Previous farm disease history
- Veterinary Health Plan

Agent	Age
Escherichia coli (ECET)	5-1 days
Clostridium perfringens B/C	14-0 days
Cryptosporidium parvum	12-7 days
Rotavirus	21-4 days
Coronavirus	30-5 days
Giardia duodenalis	30-5 days

Causes of diarrhea and age at which calves are mostly affected.

> STEP 2

UNDERTAKE FECAL SAMPLING

Enteric conditions caused by infectious microorganisms can be diagnosed from fresh fecal samples. When sampling a herd the following should be considered:

- Sample a group of at least five affected animals
- Collect fecal samples from the animal and not from the floor

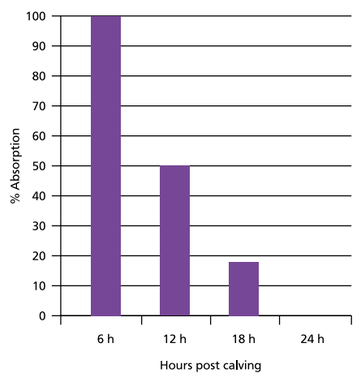
On site Diagnosis, an easy and quick option

On site kits give a diagnosis within minutes of collecting the samples.
Pathogens that can be tested for are: Rotavirus, Coronavirus, *E. coli* and *C. parvum*.

> STEP 3

EVALUATE COLOSTRUM INTAKE

Colostral antibodies provide local protection in the gut of the calf but a portion is also absorbed into the blood stream. The capacity for absorption of antibodies is high during the first hours after birth and disappears once the calf is 24 hours old. The quality of the colostrum feeding regime can be evaluated by measuring the level of IgG in blood. Values of less than 10 g/l are indicative of inadequate colostrum intake.



Antibody absorption in calves during the first 24 hours of life.

> STEP 4

MEASURE COLOSTRUM QUALITY

Inadequate colostrum intake can be the result of feeding poor quality colostrum. Colostrum quality can be measured using a colostrometer. The antibody level is measured in a sample of 250ml of colostrum. If colostrum does not contain sufficient antibody levels, action can be taken. Colostral antibodies can be boosted with vaccination.

> STEP 5

DEFINE AND IMPLEMENT A PREVENTION/ TREATMENT PROTOCOL

Actions following the diagnosis of neonatal diarrhea on a farm are at three levels:

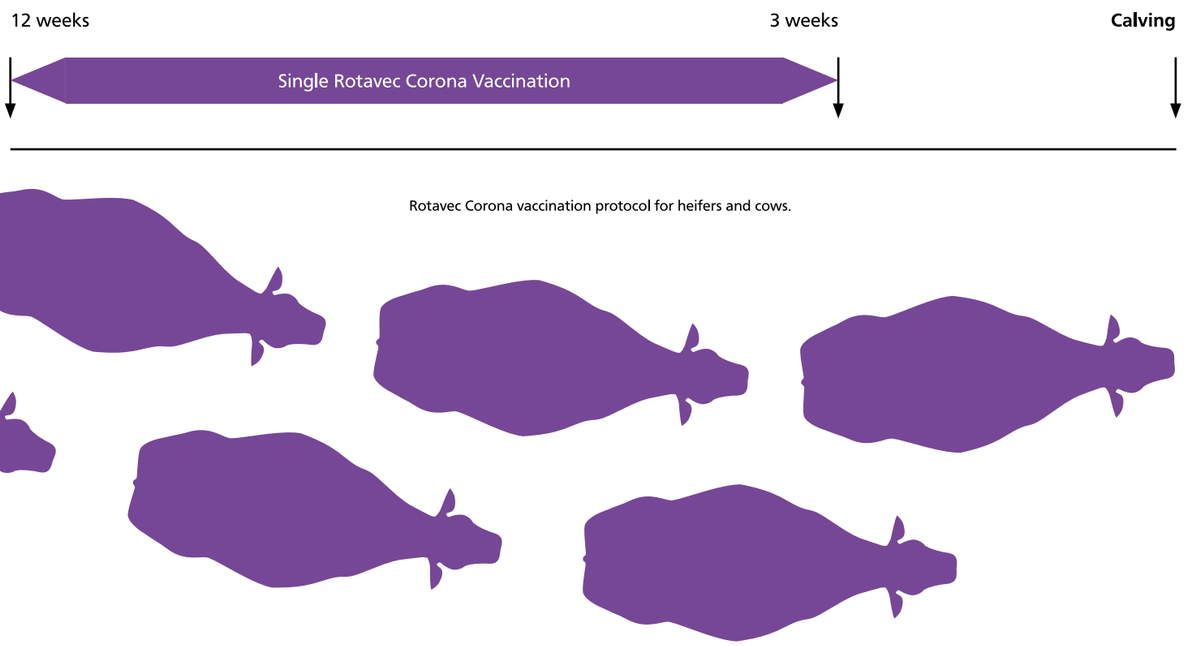
- Treatment of affected animals: rehydration (IV/oral), antibiotic and/or *C. parvum* treatment, NSAID'S
- Colostrum management: corrective measures must be taken if problems are identified with the administration of colostrum to neonatal calves
- Prevention: implementation of vaccination protocols with Rotavec Corona and preventive use of Halocur for the control of *C. parvum*

BOVILIS®
Rotavec® Corona

High efficacy, outstanding convenience

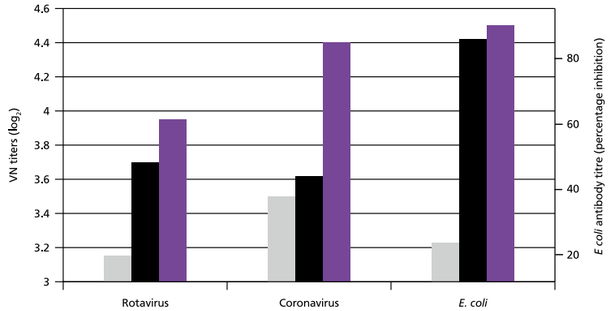
Rotavec Corona features outstanding efficacy against the main viral and bacterial enteric pathogens while delivering true convenience. Its single shot formula and broad window of vaccination (from 12 to 3 weeks prior to calving) makes it exceptionally well-suited to group vaccination.

- High efficacy demonstrated under laboratory and field conditions
- Single shot primary course
- Convenient group vaccination possible with the broad window of vaccination (12-3 weeks prior to calving)
- Low dose volume. Only 2 ml per dose
- Easy intramuscular administration of the product
- A practical range of presentations: 1, 5 and 20 doses



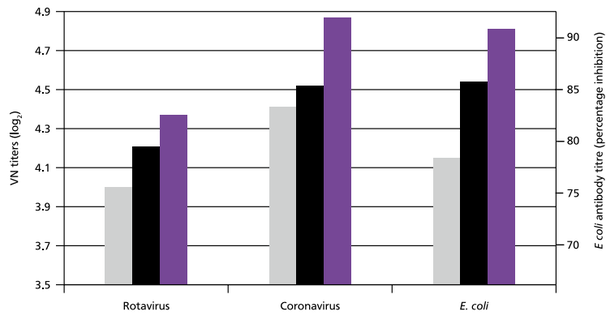
Rotavec Corona vaccination protocol for heifers and cows.

MATERNAL ANTIBODY TITERS IN COLOSTRUM FROM DAIRY COWS



Comparative evaluation of vaccination with Rotavec Corona and a second vaccine in the level of colostrum maternal antibodies of dairy cows.

MATERNAL ANTIBODY TITERS IN COLOSTRUM FROM BEEF COWS



Comparative evaluation of vaccination with Rotavec Corona and a second vaccine in the level of colostrum maternal antibodies of beef cows.

- Control
- Vaccine B
- Rotavec Corona

Halocur:

The first available product for prevention and treatment of cryptosporidiosis

Halocur is unique. It is the only product registered for the prevention and treatment of cryptosporidiosis in newborn calves. Its efficacy has been demonstrated in vitro as well as in artificial and natural infections.

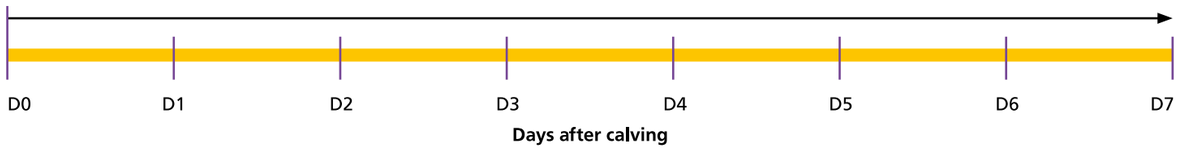
- Halocur can be used for Cryptosporidium prophylaxis as well as for the treatment of diseased animals
- Due to the cryptosporidiostatic action a marked decrease in fecal oocyst shedding is seen when infected animals are treated
- Halocur suppresses the parasite rather than killing it and hence does not significantly interfere with the development of host immunity
- Clinical symptoms like diarrhea and inappetance will improve after Halocur treatment starts.
- A dose mechanism that facilitates correct dosing is provided
- Presentations of 480 ml and 960 ml

CRYPTOSPORIDIOSIS PREVENTION

Treat all newborn calves with Halocur

- within 24 hours of birth
- with 2 ml per 10 kg bw orally
- once daily, for 7 consecutive days

Calving



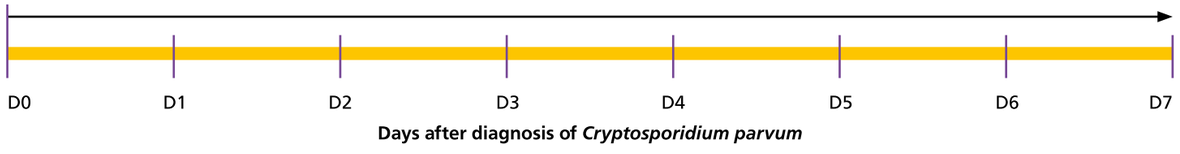
Days after calving

CRYPTOSPORIDIOSIS THERAPY

Treat all calves aged less then 3 weeks with Halocur

- within 24 hours after diagnosis of Cryptosporidiosis
- with 2 ml per 10 kg bodyweight, orally
- once daily, for 7 consecutive days

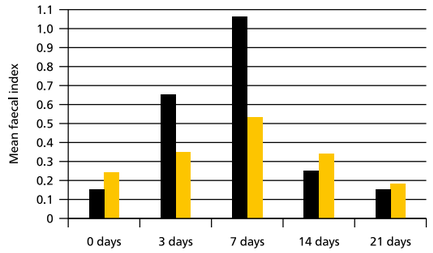
***C. parvum* diagnosis**



Days after diagnosis of *Cryptosporidium parvum*

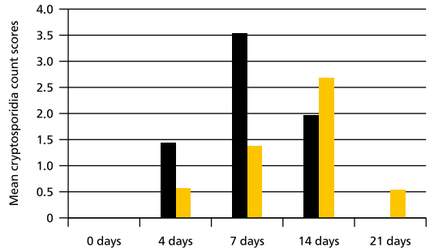
PREVENTIVE USE OF HALOCUR

REDUCTION OF SEVERITY OF CALF DIARRHEA



In a multicentre field study, the preventive use of Halocur in farms diagnosed with diarrhea due to *C. parvum* reduced significantly the severity of diarrhea enabling at the same time the development of natural immunity in the treated calves.

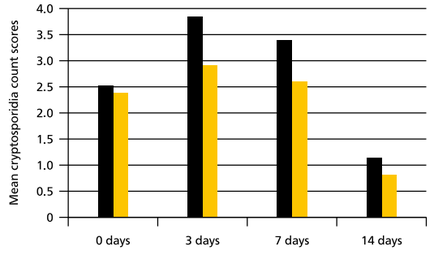
REDUCTION OF OOCYST OUTPUT



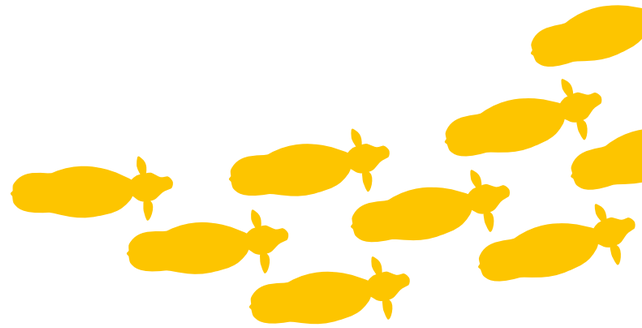
In a multicentre field study, the preventive use of Halocur in farms diagnosed with diarrhea due to *C. parvum* significantly delayed the peak excretion of oocysts and reduced the level of oocyst excretion.

THERAPEUTIC USE OF HALOCUR

REDUCTION OF OOCYST OUTPUT



In a multicentre field study, the curative use of Halocur in farms diagnosed with diarrhea due to *C. parvum* significantly reduced the level of oocyst excretion, environmental contamination and the risk of calves presenting liquid diarrhoea.



BOVILIS® Rotavec® Corona

Halocur

THE UNIQUE COMBO THAT CONTROLS NEONATAL DIARRHEA

- **Rotavec® Corona:** the single shot vaccine against neonatal diarrhea
- **Halocur:** the only product registered for the prevention and treatment of cryptosporidiosis
- Together they form a unique combination that controls neonatal diarrhea and keeps your herd's performance on track

EARLY CARE, LIFE LONG GAINS

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