Cure calf diarrhea,

Background

Information.

Disclaimer:

In compiling this book, the greatest care has been taken to ensure the accuracy of the information contained herein.

However, Joost de Groot cannot be held responsible for any incorrect information provided in this book.

Joost de Groot.
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Introduction.

If you have a problem with scours you want quick and easy to understand information on how to solve the problems you have with your calves. Later on, if the problems are over, you might want to know how to prevent getting diarrhea in the future. The last part of my other book, “Cure calf diarrhea” is about these issues. This book can help you make a better decision on that, by understanding the ins and outs of calf diarrhea.

What makes it that sometimes severe scouring calves appear to stay healthy and other calves, which have only a little bit of diarrhea, are extremely sick? What causes that some calves get diarrhea in the first days after birth and others only after a couple of weeks? When is it useful to use antibiotics and when not? Is it worthwhile to vaccinate your cows for scours?

These are only a couple of questions you want to have answers for. I also wanted to have those answers when I came across the diarrhea problems in the calves I took care of. Through the years I have been collecting this information. Modern times, by means of the internet, make it a lot easier to find information. I have combined my own knowledge with the information found on the internet and put it together in this book. As a result this book provides much background information on calf scours. I’ve made this supplemental book because in the other book I wanted to stick to only practical information.

I hope that by reading this supplemental book you can make a better decision on how to prevent getting calf diarrhea again.

If you ever have any questions or comments, you can always send an Email to: joost@curecalfdiarrhea.com

Success in preventing to have diarrhea problems again!

Joost de Groot.

p.s. I have organized this book in such a way, that with every chapter I’ve first explained the subject and then added some links to the internet. There you can find additional information about that subject.
Calf diarrhea.

Calf diarrhea is a common disease affecting the newborn calf. The most critical period is in the first 4 weeks of age. Calves haven’t built up their own resistance. By giving the calf colostrum of good quality quickly after birth, the antibodies, provided by the dam, help the calf to build up that resistance. This way the causing factors of getting scours have a lot less chance of making a calf sick.

The diarrhea and other clinical signs seen with the disease are caused by the interaction of any of several possible infectious causes and predisposing factors such as lack of colostrum, failure to absorb colostral antibody, poor nutrition and environmental affects. Calf scours is a costly disease, with losses estimated to be over $250 million annually and death loss of up to 25% of the U.S. calf crop.

http://cattletoday.info/calfscours.htm
http://www.waterlooanimalhospital.com/Library/Cattle/scours.html

Symptoms of calf diarrhea.

In cases of Salmonella and E-coli infection calves are usually severely affected, do not drink milk, become severely dehydrated and have a high fever. Feces are watery and often tinged with blood. There is a high mortality rate among infected calves, with death occurring within 12-48 hours after the first signs appear.

In cases of Clostridium perfringens infection affected calves show uneasiness and strain or kick at their abdomen. Calves are often found dead without having shown any symptoms.

In cases of Rotavirus and Corona virus, infections profuse watery scours, near normal body temperature, depression and dehydration. There may be drooling of saliva; calves may appear to be constantly straining to pass feces.

In case of Coccidia and Cryptosporidia infections subclinical (chronic) infections show few outward signs, but animals suffer reduced feed consumption, feed conversion and growth.

Source: http://www.merricks.com/tech_calfscours.html

http://www.extension.org/faq/3467
Causes of calf diarrhea.

There are many different causes that can give diarrhea to calves. The most common causes you can divide into four groups. These are:

Bacteria, viruses, protozoa and nutritional diarrhea.

Because there was so much background information on the first three causes, I’ve made 3 additional books; the bacteria-, the virus- and the protozoa book. If you haven’t downloaded them yet, you can still do so here: http://calfscourstreatment.com/free-newsletter/thank-you/

(If you can’t follow the download link, please copy and paste it in your web browser)

Nutritional diarrhea.

This type of scours is usually caused by a sudden change in the feed the calf gets. Some examples:
- A change of feed the dam is receiving.
- Change of supplier of milk replacer.
- Differences in temperature of the milk.
- Contamination of the milk or milk replacer.
- Changes in the concentration of the milk replacer.

It’s obvious that you should give both the dam and the calf a ration that doesn’t change too much.

http://www.iowabeefcenter.org/pdfs/bch/03056.pdf

http://www.merricks.com/tech_calfscours.html
Products that help to cure diarrhea.

Protozoa are amongst the most difficult causes of scours to get rid of. They can survive a long time outside a calf. Most disinfectants won't work and burning of the concrete floor and the slats seems to be the only solution. The only thing that I have used effectively is “Halocur”. You can find information about it on the following website:


Linseed.

Flax: Source of linseed oil and linen. Said to be soothing and softening to irritated membranes. The ground seed mixed with boiling water to make a thick mush is used for poultices. Any herb, such as smartweed, elm bark, hops, mullein, or any other herbs recommended, can be added. Use as a poultice on old sores, boils, inflammations, skin ulcers, wounds, and tumors. Poultices should be changed at least every 2 hours; have a new, hot poultice ready to apply before the old one is removed.

Used for female disorders, colon problems. Promotes strong nails, bones, and teeth and healthy skin. A decoction of the seeds can be used for coughs, catarrh, chronic bronchitis, asthma, pleurisy, fever, dropsy, leprosy, pimples, age spots, burns, scalds, gout, inflammation, cystitis, lung and chest problems, and digestive, gastritis, dyspepsia, diarrhea, and urinary disorders. To eliminate gallstones, take 1 1/2 to 2 tbsp. linseed oil and lie down on your left side for a half hour. The gallstones will pass into the intestines and be eliminated from there. Eating the seeds intact is useful for chronic constipation. The seeds swell up in the intestines, encouraging elimination by increasing the volume of fecal matter. For emollient uses and for rheumatic complaints, apply a linseed poultice. The oil was a folk remedy used for pleurisy and pneumonia.

The seed has been used for ages as a medicine. Take 1 tsp. of the whole seed mixed with water, orange juice, vegetable juice, etc., to provide a gentle lubricant laxative. Or use this mixture as an enema.

Source: http://www.emedicinal.com/herbs/linseed.php

Remark: I use linseed only mitigate the intestinal walls if a calf already has scours a couple of days. Be careful not to use it too abundantly because in that case it rather promotes diarrhea instead of preventing it.

http://www.hort.purdue.edu/newcrop/duke_energy/Linum_usitatissimum.html

http://www.emedicinal.com/herbs/linseed.php

Pectins.

Pectin has a number of therapeutic uses. As pectin enhances the thickness as well as volume of stool, in medicine it is use to treat constipation and diarrhea. Apart from the usefulness of pectin in the human food processing, it also serves as a nutrient in cattle fodder. As far as the cattle food is concerned, about 90 per cent of pectin is digestible by bacterial enzymes depending on the degree of deposits of lignin on the plant cell walls. Cattle food specialists suggest that it is possible to enhance
digestibility as well as energy concentration by means of augmentation in the fodder. Apart from what has been discussed earlier, pectin has numerous uses in protecting our body and ensuring a sound health. In fact, pectin has the capacity to reduce serum cholesterol, especially low density lipoprotein (LDL) cholesterol, enhance the resistance of insulin and to help in getting respite from diarrhea. In addition, pectin also functions as a detoxifying agent, helps in regulating as well as protecting the gastrointestinal tract, invigorates the immune system, and also functions as an anti-ulcer agent and is also antinephrotic and hence often used in the treatment of kidney diseases. Pectin along with other dietary fiber elements plays a crucial role in avoiding a spillover of the glucose levels in blood by means of supporting satiation and also most likely by lowering the absorption of glucose after ingestion of glycaemic carbohydrate. Hence, ingestion of pectin is considered to be beneficial for people suffering from diabetes. Ingestion of pectin is also said to be effective in lessening heart ailments as well as gallstones.


http://www.drugs.com/cdi/kaolin-pectin.html
http://www.wisegeek.com/what-is-pectin.htm

Colostrum supplements and replacers.

Colostrum supplements can boost the calf’s immunity capabilities if the colostrum is of poor quality. This is sometimes the case in high yielding dairy cows. With such cows you have to give up to 6 liters of colostrum or more to the calf in order to receive enough immunoglobin levels (igG).

Colostrum replacers, on the other hand, are designed to be fed to calves as a complete alternative if you don’t have colostrum available.

http://www.colostrx.com

Colistin.

Colistin is an antibiotic used against gram-negative bacteria like E. coli, Haemophilus and Salmonella.

Enrofloxacin (Baytril).

Enrofloxacin is prescribed for the treatment of several types of infections as well as preventative care in livestock. It is used against gram-negative and gram-positive bacterial infections like E-coli, Staphylococcus, Salmonella and Klebsiella.

http://www.ehow.com/about_4576665_what-is-baytril.html


The link below directs you to a site about the discussion of antibiotics use in livestock.

http://www.fmi.org/docs/media/bg/antibiotics.pdf

Dehydration and electrolytes.

Dehydration is the most important cause of mortality among young calves. If a calf is dehydrated you can observe the following signs: The calf is depressed, the eyes are sunken, it has a dry mouth and nose, the legs get colder and the skin is very tight. At this stage the calf’s metabolism gets imbalanced and acidosis starts to develop. Acidosis occurs when the calf can’t absorb enough nutrients combined with a shortage of fluids. As a result the chemical balance is disrupted. This imbalance causes the acidosis in the blood. Later on the calf won’t stand up anymore and ultimately gets into shock and dies.

Therefore it is very important to rehydrate the calf a.s.a.p. with the right electrolytes. There are electrolytes that are used as a supplement for healthy calves. You need the ones used for calves with diarrhea!

http://www.americanlivestock.com/pc-4-15046-advance-arrest.aspx  This is an example of a bag of electrolytes designed for calves with diarrhea.

http://www.americanlivestock.com/pc-97-15046-blue-ribbon-electrolytes.aspx This is an example of a bag of electrolytes designed as a supplement for healthy calves.

http://www.extension.org/pages/Calf_Diseases_and_Prevention

http://www.extension.org/pages/Electrolytes_for_Dairy_Calves
Keep the calf active.

In order for the calf to overcome the diarrhea problems as soon as possible it is important to keep the calf active. Below are some products that can help keeping the calf active.

**Dexametasone.**

Dexametasone (Voreen) is a glucocorticoid that can improve the overall metabolism of animal and is also an inflammation inhibitor. You can find more information on the following websites:


**Aspirin powder.**

If a calf is mildly sick or in an early stage, giving it aspirin powder is sometimes enough to overcome its scours problems. Aspirin powder is used for relief of body pain and fever.

http://www.drugs.com/vet/aspirin-powder.html

http://wildlife1.wildlifeinformation.org/s/00Chem/ChComplex/aspirin.htm

**Buscopan.**

Buscopan helps if a calf has cramps cause by diarrhea, it also works as a painkiller and a fever suppressor.


http://www.drugs.com/vet/buscopan-sterile-solution-can.html


**Test strips/ test kits.**

Test strips or test kits are a useful “on farm” tool to quickly identify the cause of scouring calves. It is always cheaper than sending samples for analysis to a lab and you have the results within a couple of hours.


http://www.gshepherdanimalhealth.co.uk/cows.html

Vaccinating.

By vaccinating the cows you can improve the quality of the colostrum and thus give the calf a better protection. Vaccines are an important tool to use in herd health programs for the protection against scours.

http://www.save-a-calf.com
http://www.valleyvet.com/catalog_products/farm_ranch_supplies/cattle_vaccines/cow_scours.html

Circumstances in which calves are kept.

It is important that the circumstances in which calves are kept is optimal. The most important circumstances are a dry and draft free housing.

Are the calves able to have direct contact with other calves that are older? Is it possible to clean and disinfect the pens completely? Are there still places where bugs can survive? Is it easy to wash and disinfect the utensils?

http://www.sac.ac.uk/mainrep/pdfs/tn574calfscour.pdf

Spreading of scours.

In order to prevent the spreading of scours you can take several measurements. A number of them are mentioned below.

All in all out system.

You should use an all in, all out system as much as possible. It doesn’t matter how small or large your farm is, always move calves of the same age together. If you have a small farm and only have 4 calves of the same age; Move them always together as a group and don’t mix them with calves of other ages. The younger calves are always more at risk. Always clean and disinfect the empty pen.

On a bigger farm try to make it possible to empty, clean and disinfect your entire barn.

http://www.meattradenewsdaily.co.uk/news/270410/ireland__disease_in_cattle.aspx

Quality of MR/ Calf nutrition.

What are the actual benefits of a high- vs. low-quality milk replacer? The feeding of a high-quality milk replacer will result in more rapid growth, a thriftier, more vigorous calf and reduced scours.
problems. Since there is a direct relationship between level of nutrition and incidence of disease, high-quality milk replacer will result in a reduced incidence of disease.


http://www.calfcare.ca/index.php?option=com_content&task=blogcategory&id=30&Itemid=54


The use of disinfectants.

Usually disinfectants are “cidal” in that they kill the susceptible potential pathogenic agents. The selection of a disinfectant should be based on the job you expect the disinfectant to do, not necessarily on a sales pitch or on what you have always used. Ideally, select a disinfectant that is Broad spectrum (eliminates bacteria, viruses, protozoa, fungi and spores) and is nonirritating, nontoxic, noncorrosive and inexpensive. Selection decisions should include effectiveness against the potential pathogenic agent, safety to people/animals, impact on equipment, the environment, and expense.


http://www.gshepherdanimalhealth.co.uk/cows.html

Pest control.

*Control birds.*

Pigeons, sparrows, starlings and swallows are the most common birds found in and outside barns. They may carry infectious agents on their feet and within their digestive system.

*Control rats and mice.*

A rat deposits 25,000 droppings and a mouse deposits 17,000 droppings in one year. Even a small population of these rodents may severely contaminate feed supplies. In addition, rodents carry disease agents on their feet and fur, and they destroy millions of dollars worth of feed, supplies and buildings each year.

Control flies.

Of the thousands of species of flies, only a few are common pests in and around the home. Some of the more common nuisance flies are the house fly (Musca domestica), the face fly (Musca autumnalis), the stable fly (Stomoxys calcitrans), the little house fly (Fannia canicularis), and several species of garbage fly (especially in the genus Phaenicia). These pests breed in animal wastes and decaying organic material from which they can pick up bacteria and viruses that may cause human diseases. In addition, adult stable flies (sometimes called “biting flies”) feed on mammalian blood and can give a painful bite.


http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7457.html

Below you can find a link to a good website with a lot of information about the points mentioned above.

http://www.omafra.gov.on.ca/english/livestock/vet/facts/09-079.htm#spread

Housing of calves.

If you are looking at the housing of your calves there are some things that are important in the prevention of diarrhea. The first 4 weeks the calves should have the possibility to be kept separately. Calf housing should be dry, draft free and easy to be cleaned. They should be easy to work with, not too expensive and flexible. In my opinion calf hutches are the first choice.

http://www.thedairysite.com/articles/1142/the-best-dairy-calf-housing-design
http://www.agriculture.gov.sk.ca/Beef_Cattle_Housing
Relation between feeding dry cows and healthy calves.

It is important to give the cows a good balanced ration. A cow needs to be prepared to produce good quality colostrum. Vitamins and minerals are especially important in this. It makes the cows able to deliver healthy calves and optimal colostrum at birth. Remember, good colostrum contains energy, proteins, antibodies, vitamins, minerals, all in the correct levels that a newborn calf needs.

Especially the last 6 to 8 weeks is important because the calf grows the most in that period and the cow is preparing for a new lactation. In fact the dry period is the most important period for both the calf as well as the mother for the next year.

http://www.ag.ndsu.edu/pubs/ansci/beef/as1207.pdf
http://www.das.psu.edu/research-extension/dairy/nutrition/pdf/drycowsandheifers.pdf
Summary.

If you had severe diarrhea problems on your farm, you know one thing for sure. You never want to have that again! In order to achieve this you first have to know all about the ins and outs of scours. You have learned a lot about calf diarrhea problems with my other book, “cure calf diarrhea”. This book gives you background information to help you dealing with some major topics. These topics are: recognition, curing and prevention of scours.

Recognition and curing of scours.

Knowing exactly what is going on in and around a scouring calf is important in order to understand how to recognize and cure the scouring calf. What are the causes and why are they causing diarrhea? What happens exactly with a calf that is dehydrated? What products can you use to cure the scours and what is the working of these products?

Prevention of spreading of scours.

If the calves have diarrhea it is important to prevent the spreading in order to keep the damage to a minimum. How can you make that possible? What are the sources that spread the scours and how can you eliminate them? Do you have to change the way you work?

Prevention of getting scours.

If your calves had diarrhea, you definitively want to prevent ever having diarrhea problems again. How can you do that? Do you have to change the circumstances in which your calves are kept? Do you have to change the housing of your calves? Do you have to change your management regarding your calves? What influence has the feeding of the dry cows on the health status of the newborn calf?

p.s.

Because links on the internet sometimes change or move to another place, it can be possible that the links mentioned in this eBook won’t work anymore. If this is so, please let me know. I will try to find the link to the mentioned information again. If this isn’t possible I’ll find an alternative.

If you search long enough, you can find everything on the internet! Sometimes though, it takes a long time to find what you are looking for. I will do that for you, and that’s my service to you!