

The background of the lower half of the page is a dark blue image featuring a stylized globe. Overlaid on the globe are numerous glowing white and light blue lines that represent a global network or data flow, creating a sense of connectivity and technology.

***"Best **hygiene** and
welfare for farm animals
– the **Danish solution**"***

***"Let's do what
we do best...
together"***



PROFESSIONAL HYGIENE SOLUTIONS



DESTEK – A DANISH COMPANY

Destek is a Danish production and trading company, owned by Jackie B. Mahlert and founded in June 2002. The company provides modern, high-quality products for professional farmers and is rooted in Danish farming. Since its founding, Destek has specialized in hygiene products, primarily for professional farms with pig, dairy, cattle, poultry and mink production. It is essential to us that we offer high-quality products at competitive prices and share our expert knowledge in animal hygiene.

QUALITY AND VERY HIGH STANDARDS

We are located in Store Merløse, Denmark, from where we distribute directly to our Danish customers and to our distributors abroad. Destek exports to many countries, where we market our well-known brands Basic® and FiberCombi® together with selected distributors. Recently, our newest hygiene powder VivuSan® and our toxin binder DT ToxiTop have been added to our export portfolio. We expect further significant growth, based on the continually rising interest in our products.



THE HISTORY OF DRY HYGIENE POWDERS

The world's first dry disinfectant was invented by a Danish veterinarian in 1964. He had found it difficult to maintain a reasonable level of animal hygiene in livestock housing. For washing and disinfection the animals had to be moved, which was very troublesome and sometimes impossible. He was convinced there had to be a way to disinfect with the animals present, and this idea led to the invention of the first dry disinfectant. The product was a great success, and it soon became common, almost traditional, to use a dry disinfectant on animal farms in Denmark.

More than 50 years have passed since then, and there has been a lot of further development in the use of dry hygiene powders for animals, as well as in the range and quality of products, both in Denmark and abroad.

DRY DISINFECTANTS AND DRYING AGENTS

The hygiene powders on the market today can be divided into two groups:

- **Dry disinfectants**
- **Drying agents**

Dry disinfectants contain one or more active ingredients, which have a killing effect on harmful pathogens such as bacteria and fungi. The killing effect can be tested in laboratories. Dry disinfectants also work by drying the environment around the animals, so the harmful pathogens cannot thrive. Drying agents do not contain an active ingredient but work only by drying the surroundings, and most harmful pathogens cannot survive in a dry environment. Because drying agents contain no active ingredient, it is difficult to prove their efficacy in a Petri dish or test tube. The absorption capacity and ingredients of these products vary widely. Both types of powder are intended to reduce the occurrence of

harmful pathogens and the infection pressure in livestock housing.

DESTEK'S HYGIENE POWDERS ARE MADE IN DENMARK

The hygiene powders produced by Destek for export are the dry disinfectant Basic® and the drying agents FiberCombi® and VivuSan®.

The production of Basic® started in 2007. The aim was to create a highly efficient dry disinfectant, almost neutral pH and good at absorbing moisture, made from very carefully selected, high-quality ingredients and offered at a competitive price. Basic® has since proved itself, with steady growth in the market. It is particularly important to us that our products are of consistently high quality, so customers get the same quality every time. Basic® is also among the most well-documented dry disinfectants on the market, tested by an independent and approved laboratory.

FiberCombi® was invented in 2013. Jackie B. Mahlert noticed a need for a completely new kind of drying agent with an extremely high absorption capacity and a unique combination of raw materials. The combination of ingredients in FiberCombi® has proven to be a great success, and the feedback has been almost overwhelming.

The newest hygiene powder in Destek's portfolio is VivuSan®. It is a fine powder designed for application with a blower and for uses such as drying newborn piglets. Depending on the production type and housing system, the products can supplement each other, but also work very well independently. It is important to Destek that these dry hygiene powders are easy to use, and the almost neutral pH makes them comfortable for both humans and animals. All three products are produced at Destek's own factory, so we control the whole process from manufacturing until the products are loaded onto trucks.



EXPERIENCES FROM THE FARM

SØRVAD – 1,190 SOWS

We are very happy with FiberCombi® and will not be switching in the future

We use FiberCombi® in the piglet nests before farrowing and for the first 4 days afterwards. FiberCombi® dries both the piglets and their surroundings really well. It is very versatile, so where we previously had 3 work routines with different products, we now have only one. We also no longer have the same trouble with diarrhoea as before. We use the dry disinfectant Basic® as well, which is really good for maintaining hygiene. Our pigs have Bordetella, and the product we used previously had a low pH and was harsh on them. So it is nice to be able to use a product that is effective without having a low pH.

NOVA LANDBRUG – 6,400 SOWS

FiberCombi® has a really good drying effect

We use FiberCombi® in the piglet nests in the farrowing section and, in the run-up to farrowing, also around the udder. For the first week we use it daily, preferably combined with the dry disinfectant Basic®. After that, both products are used as needed during the lactation period. We find that FiberCombi® is not very dusty and creates a pleasant working environment. FiberCombi® has a really good effect on diarrhoea. It dries the piglets well and supports them.

FIBERCOMBI®

A UNIQUE AND PIONEERING HYGIENE POWDER

Composed of carefully selected ingredients, each contributing to the optimal health and well-being of the animals. Its exceptionally high absorption capacity creates a very dry immediate environment, which helps eliminate the living conditions of harmful pathogens and fly maggots. Primarily used in the animals' lying areas (50–100 g/m²), it helps prevent infection and improves sanitary conditions for all types of livestock in all housing systems.

FIBERCOMBI

ANIMAL HEALTH AND WELFARE

- Limits breeding conditions for flies and other insects
- Inhibits the growth of harmful bacteria
- Suitable for all types of animals and housing systems
- Improves the housing environment
- Easy-to-handle hygiene product
- High absorption capacity
- Effectively binds / reduces ammonia
- Increases revenue





EXPERIENCES FROM THE FARM

TORBEN, LUNDBECHLUND – 1,400 SOWS: *Basic® and FiberCombi® keep the infection pressure down and the pigs' surroundings dry, so the pigs thrive. We have used the dry disinfectant Basic® since 2008, together with the drying agent FiberCombi®. We paint the farrowing pens with lime and use Basic® under the sows, as lime is too hard on their skin. Basic® is gentle on the udder.*

We spread FiberCombi® in the lying area just before farrowing, which dries the piglets quickly, and continue until they are about 14 days old. Every Friday we use Basic® on all aisles, and on Mondays in the weaner section, which reduces the risk of infection between sections. Feed intake rises substantially the day after, and weaner mortality is now stable at around 1.8%.

CASPER KABEL – 180 DAIRY COWS: *Basic® is easy to work with and has a really good drying effect in the cubicles. I have used Basic® since 2015 and apply it almost every day. I mix it with straw before spreading it in the cubicles. It has a really good drying effect, which means the cows don't "crawl up" in the cubicles. We have seen a positive development in our somatic cell count. When we stopped using Basic® for a period, we had more mastitis, and when we started again, the somatic cell counts dropped.*

original **BASIC** the solution

BASIC® HYGIENE POWDER

A SCIENTIFICALLY FORMULATED PRODUCT

Safe and easy to use, it improves the animals' environment by drying and suppressing harmful pathogens. It reduces moisture and potentially harmful gases such as ammonia. Used regularly (50–100 g/m²), it helps prevent disease and ensures a better environment for healthier animals.

Basic® is composed of selected materials, including minerals, plant components and a disinfectant active substance. It is suitable for all types of livestock and housing systems, and can be applied manually, with machines or mixed with other bedding before application.

PROVEN **EFFECTIVE** AGAINST

- E. coli
- Salmonella Typhimurium
- Streptococcus suis serovar 7
- Streptococcus uberis
- Staphylococcus aureus
- Klebsiella pneumoniae
- Aspergillus niger
- Clostridium perfringens
- Campylobacter jejuni
- Dichelobacter nodosus



DOCUMENTATION: **BASIC®** HYGIENE POWDER

A thoroughly documented Destek product that works against a range of harmful microorganisms

Escherichia coli, better known as E. coli, helps in the colon with waste processing, vitamin K production and feed uptake. If ingested, it can end up in the small intestine, where its waste products can form dangerous toxins. Like most Gram-negative bacteria, E. coli cannot form spores and is therefore easily killed by disinfection or prolonged drying.

Typical diseases caused by E. coli:

- **Diarrhoea**
- **Inflammation**
- **Sepsis**
- **Urinary tract infection (UTI)**

Staphylococcus aureus, also known as golden staph. S. aureus is found on the skin and on mucous membranes (nose, mouth, abdomen, etc.). It exists in strains that are multi-resistant to antibiotics and must therefore be controlled through a high level of hygiene. S. aureus is a Gram-positive bacterium and is also unable to form spores, so all active bacteria can be killed by treatments such as disinfection or prolonged drying.

Typical diseases caused by S. aureus:

- **Mastitis (inflammation)**
- **Abscesses**

Aspergillus niger is a mould fungus, the most common Aspergillus in nature, and thrives on almost all surfaces. It is black on top and white or yellow underneath. A. niger can make both humans and animals ill, causing lung disease by inhalation and infections, for example in the ears.

Salmonella Typhimurium, a food safety issue. It occurs in multi-resistant strains and must therefore be controlled through a high level of hygiene. Infected animals often show no symptoms but can transmit the infection to humans through meat and eggs, and to other animals or humans through manure.

Typical diseases caused by Salmonella Typhimurium:

- **Diarrhoea**
- **Sepsis**

- **Acute intestinal inflammation**
- **Chronic intestinal inflammation**
- **Pneumonia**

Klebsiella pneumoniae is a Gram-negative bacterium. It lives in the intestinal flora of mammals and is therefore also found on pen floors, spread via the manure of the animals. K. pneumoniae occurs in subtypes that are multi-resistant to antibiotics and must therefore be controlled through a high level of hygiene.

Typical diseases caused by K. pneumoniae:

- **Sepsis**
- **Inflammatory diseases such as mastitis and pneumonia**
- **Diarrhoea**

Clostridium perfringens – a tough one. C. perfringens can form spores and can even survive heat treatment. The bacterium grows in the absence of oxygen, so the intestines are the ideal environment for it. It can multiply explosively in the intestinal system and release toxins, which can cause severe diarrhoea and often result in death. So it is not the bacterium itself or the spores it forms that are dangerous, but the toxins they release. A vaccine against C. perfringens can be effective, but it is also important to mention that it is impossible to vaccinate against a poor housing environment and inadequate cleaning and disinfection.

Typical diseases caused by C. perfringens:

- **Enteritis**
- **Diarrhoea**

Streptococcus suis is a Gram-positive bacterium. It causes meningitis in pigs, but rarely in humans. Pigs are often infected through skin lesions. S. suis is found on the tonsils and can therefore also spread through “nose to nose” contact or by aerosols.

Typical diseases caused by S. suis:

- **Meningitis**
- **Arthritis**

Streptococcus uberis, the “environmental mastitis”. *S. uberis* has become a frequent cause of mastitis in dairy cows, where the infection spreads via pen floors. The treatment of mastitis is very expensive, so good hygiene and a reduction of the infection pressure in the environment are essential in preventing the disease.

Typical diseases caused by *S. uberis*:

- Mastitis

Campylobacter jejuni, a real “spreader” of infection. *Campylobacter jejuni/coli* are bacteria found in the intestines of most kinds of animals. Of all diseases that spread from animals to humans, *Campylobacter* is today the one that causes the most intestinal infections. *Campylobacter* multiplies only at temperatures between 30 and 45 °C, but can survive at low temperatures for several weeks. Because *Campylobacter* lives in the intestinal flora, it is also found on pen floors. Good hygiene is therefore essential to reduce the infection pressure.

Typical diseases caused by *C. jejuni*:

- Diarrhoea

Dichelobacter nodosus, infection of the hooves. The most important factors in hoof disease are hygiene, moisture and climate. Ammonia and urea in the manure, combined with constant moisture, destroy the hoof horn and the heel bulb horn. When the skin is damaged and has lost its resistance, bacteria that cause other hoof diseases can make the condition drastically worse. *Dichelobacter nodosus* or *Bacteroides nodosus*, isolated from cases of interdigital dermatitis, can harm the underlying tissue even further, exposing the corium and causing severe lameness. The progression is slow, but the end result is heel horn erosion, where the heel horn is gone.

Typical diseases caused by *D. nodosus*:

- Severe hoof disease
- Interdigital dermatitis
- Possibly digital dermatitis

original



the solution

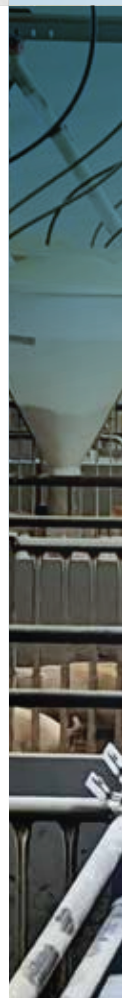
Analysis Certificate				
Mark: Basic Hygiene Powder				
Escherichia coli				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	3.600.000	1.400	45	
Control	4.500.000	5.400.000	250.000.000	
Staphylococcus aureus				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	270.000	760	100	
Control	330.000	330.000	2.500.000	
Aspergillus niger				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	45.000	9	10	
Control	56.000	57.000	91.000	
Salmonella thyphimorium				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	18.000.000	1.700	280	
Control	22.000.000	17.000.000	14.000.000	
Klebsiella pneumoniae				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	4.400.000	1.500	180	
Control	5.400.000	5.500.000	4.500.000	
Clostridium perfringens				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	35.000	<10	<10	
Control	44.000	14.000	140	
Streptococcus suis				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	20.000.000	1.500	170	
Control	26.000.000	2.700.000	9.200.000	
Streptococcus uberis				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	66.000.000	1.000	140	
Control	82.000.000	110.000.000	20.000.000	
Campylobacter jejuni				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	8.500.000	1.600	10	
Control	11.000.000	8.500.000	16.000.000	
Dichelobacter nodosus				
Unit / Time	CFU/ml at time = 0	CFU/ml after 1 hour	CFU/ml after 48 hours	
Basic H.	710.000	910	<100	
Control	880.000	77.000	<10	



IMPROVING HYGIENE FOR THE ANIMALS

VivuSan® is ideal for improving hygiene around the animals and for drying newborn piglets, which helps prevent a drop in body temperature during the first hours of life. It helps prevent infection, including umbilical cord infection, and improves sanitary conditions for all types of livestock in all housing systems.

Thanks to its complex composition, VivuSan® has a high absorption capacity, which creates a very dry immediate environment and helps eliminate the living conditions of harmful pathogens and fly maggots. It is a fine powder suitable for application with a blower and can be used throughout the entire building. VivuSan® improves conditions for all kinds of animals. In pig production, it can be used in all sections, from farrowing through nursery and finishing to breeding and gestation.



VIVUSAN®

ADVANCED HYGIENE POWDER

Developed to improve sanitary conditions, it can be used with the animals present. It is composed of carefully selected ingredients, each contributing to optimal health and well-being. It is ideal for improving hygiene around the animals and for drying newborn piglets, which helps prevent a drop in body temperature during the first hours of life. It is a fine powder suitable for application with a blower.

VIVUSAN

ADVANCED ANIMAL HYGIENE

- Limits breeding conditions for flies and other insects
- Inhibits the growth of harmful bacteria
- Suitable for all types of animals and housing systems
- Improves the housing environment
- Easy-to-handle hygiene product
- Strong drying effect – binds ammonia
- Economical in use
- Increases revenue



DT ToxiTop



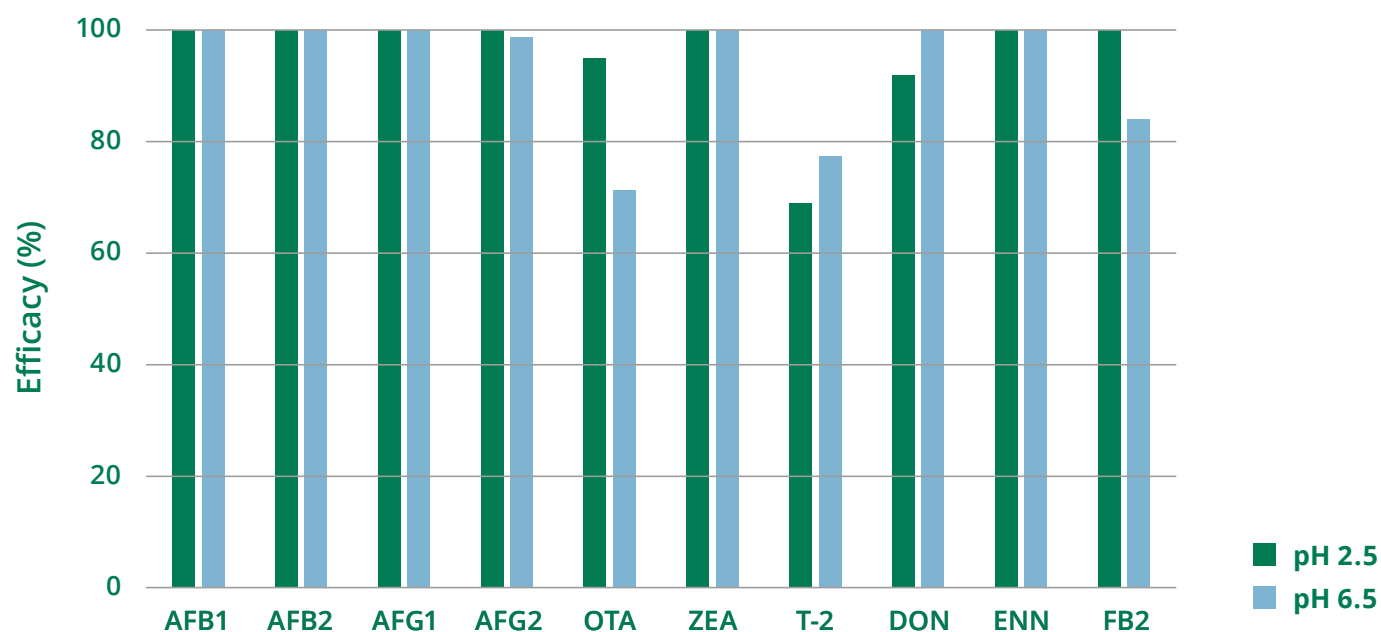
A COMPLEX AND EFFECTIVE TOXIN BINDER

DT ToxiTop contains, among other ingredients:

- Hydrated aluminosilicates
- Yeast cell walls
- Antioxidants
- Herbs and spices (phytogenics)
- Enzymatic biotransformers

DT ToxiTop properties:

- Protects essential nutrients from damage
- Prevents oxidative stress
- Adsorbs and binds mycotoxins
- Reduces immunosuppression
- Restores organ function
- Biotransforms mycotoxins enzymatically



CLINICAL SYMPTOMS OF MYCOTOXICOSIS IN PIGS

Possible symptoms of poisoning A: Sexually immature / B: Sexually mature	DON		T2 / HT2		ZEA		FB1	
	A	B	A	B	A	B	A	B
Reduced appetite	X	X	X	X			X	
Reduced weight gain	X	X	X	X			X	
Diarrhoea	X	X						
Vomiting	X	X						
Gastrointestinal bleeding							X	
Gastrointestinal irritation	X	X					X	
Oral and skin lesions			X	X				
Impaired immunity	X	X	X	X			X	X
Vaginal / rectal prolapse					X			
Swollen mammary glands					X			
Swollen vulva					X			
Reduced fertility		X		X		X		X
False pregnancy						X		
Newborn piglets with swollen vulvas						X		
Small / weak litters		X				X		X
Abortion		X		X				X
Pulmonary oedema							X	
Liver damage							X	
Enlarged uterus					X	X		
Shrunken ovaries					X			



- Reduced daily weight gain
- Increased feed consumption



- Reproductive problems
- Reproductive disorders



- Higher replacement rate



- Secondary: Increased susceptibility to infectious diseases

READ SOURCE:
DANISH AGRICULTURE
& FOOD COUNCIL



AFLATOXINS, ZEARELENONE AND DON

- Reduced fertility
- Increased foetal mortality
- Increased number of stillborn piglets
- Abortions
- Vulvovaginitis / swollen vulva

AFLATOXINS, DON, T-2 AND FUMONISINS

- Intestinal damage, ulcers and bleedings
- Poor digestion and absorption in the gut
- Undigested feed in the faeces
- Diarrhoea
- Reduced villus height and crypt depth
- Salmonella infection, enteritis / colibacillosis

AFLATOXINS, OCHRATOXINS, DON AND T-2

- Poor antibody production / vaccine efficacy
- Impaired immunity
- Altered cytokine profile
- Increased mortality

OCHRATOXINS, CITRININ AND PENICILLIC ACID

- Kidney damage
- Uric acid crystals in the kidneys and joints (gout)
- Increased water consumption

T-2 AND DON

- Reduced feed intake

AFLATOXINS, OCHRATOXINS AND FUMONISINS

- Liver damage
- Enlarged liver
- Fatty liver

FUMONISINS AND MONILIFORMIN

- Enlarged heart
- Heart failure
- Pulmonary oedema (fluid accumulation in the lungs)



DT TOXITOP

RESULTS OVER 12 MONTHS



PREVENTIVE

Dry cow improvement
Better appetite
Less mastitis
Fewer fallen cows

Great well-being
Stronger immunity
Higher yield
Stable cell counts
Better fertility

Fat % rises
Higher yield

Lower cost per cow
Older cows yield more

0

3

6

9

12

POISONING

Stronger dry cows at calving
Fewer dead cows
A sparkle in the eye
Better well-being
Better appetite
Less mastitis
Less diarrhoea
Fewer fallen cows (robot)
More protein, no problems
Fewer unexplained swings
Stronger resistance to:
E. coli and salmonella

Cow's day 0 (age 3-9 months)
Better stability
Cleaner cows
Stronger liver and organs
Fewer cows needing attention
Fewer treatments

Great well-being
Better immunity
Higher yield
Stable cell counts
Better fertility

Supports animal health
Fat % rises
Fewer sick cows
Fewer vet visits

Lower cost per cow
Extra immune boost
Stability ... stability ... stability
Older cows yield more

MYCOTOXIN EXPOSURE IN RUMINANTS

MICROBIAL DEGRADATION

Higher resistance and tolerance than monogastric animals, thanks to more effective degradation in the rumen.

FEED INGREDIENTS

The feed materials used lead to higher exposure to a wider range of toxins at higher concentrations.

IMPACT

Dairy cows are more susceptible than beef cattle and veal calves due to higher feed intake and increased metabolic stress.



AFLATOXINS

- Decreased milk yield
- Liver damage
- Discarded milk
- Increased somatic cell count
- Reduced resistance
- Weakened immune system
- Weight loss

ZEARALENONE

- Lower pregnancy rate
- Changes in oestrous cycle
- Cystic ovaries
- Abortions
- Prolapse
- Intestinal infections

HT-2 / T-2

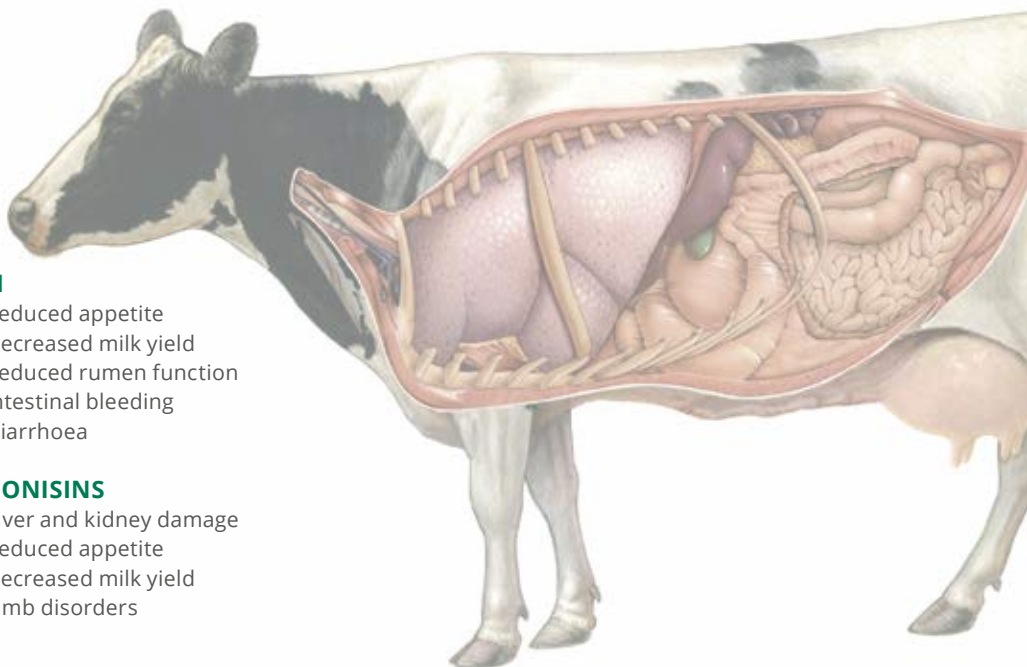
- Intestinal bleeding
- Poor immunity
- Reduced appetite
- Reduced milk production

DON

- Reduced appetite
- Decreased milk yield
- Reduced rumen function
- Intestinal bleeding
- Diarrhoea

FUMONISINS

- Liver and kidney damage
- Reduced appetite
- Decreased milk yield
- Limb disorders



***"We provide modern,
high-quality **products** for
professional farmers"***



***"Get in touch
– we're ready to
help you **succeed**"***



DESTEK APS

Tåstrupvej 7

DK- 4370 Store Merløse

Call us **+45 3313 1125**

Email us **info@destek.dk**

VISIT US AT
DESTEK.DK

