

## Q Phos-Cal-Mag Caps



## Q Ca-Formate Caps

## Q Veyxapron Caps

- Complementary feeds for dairy cows with particular nutritional purposes to provide essential minerals and vitamins during periods of increased demand
- User-friendly oral application
- Mucous membranes are neither harmed nor irritated
- Rapid dissolution in the rumen



Formulations for professionals  
demanding peak performance

# VeyFo® Q Phos-Cal-Mag Caps



## Conception/essential components for the nutritional purpose:

Capsule containing dicalcium phosphate, calcium formate, dihydrogene phosphates, magnesium sulphate and vitamin D<sub>3</sub>

## Product characteristics

VeyFo® Q Phos-Cal-Mag Caps have been formulated with organically bound high-quality components that are rumen-stable and have an excellent bioavailability. The capsules are directly given to individual animals by means of a balling gun. They are a complementary feed for dairy cows with the particular nutritional purposes

*reduction of the risk of milk fever and  
reduction of the risk of ketosis/acetonaemia*

formulated according to the list of intended uses of animal feedingstuffs for particular nutritional purposes.

## Significance and biological functions

Both ketosis and milk fever in dairy cows, particularly before and after calving, are triggered by fat metabolism disorders which might be concomitant with a considerable damage on the liver. The reason for that are feeds which are not properly balanced or are deficient in glucose supplying energy sources and essential minerals and micronutrients.

VeyFo Q Phos-Cal-Mag Caps contain calcium of Ca formate which is rapidly available thereby providing slow-acting Ca compounds for the intestine. Organic phosphorus sources have a high bioavailability and rumen stability. As a further important component, vitamin D<sub>3</sub> promotes Ca mobilisation whereas Mg sulphate specifically aims at achieving the electrolyte balance.

## Dosage/feeding recommendations

Feed 1 capsule immediately before or after calving and 6 - 12 hours later one more capsule.

The dosage may be increased to 2 capsules each if necessary.

Recommended feeding duration: Beginning with the first signs of parturition up to 2 days after parturition.

It is recommended that a nutritional expert's opinion be sought before feeding the product.

Owing to its increased level of vitamin D<sub>3</sub> content, the product is to be fed to dairy cows only up to 2 % of the daily ration.

## Package size

Box with 6 capsules of 110 g

# VeyFo® Q Ca-Formate Caps



## Conception/essential components for the nutritional purpose:

Capsule containing calcium formate, calcium sulphate, dihydrogene phosphate, magnesium sulphate as well as vitamin D<sub>3</sub> and vitamin E

## Product characteristics

VeyFo® Q Ca-Formate Caps have been formulated with organically bound high-quality components that are rumen-stable and have an excellent bioavailability. The capsules are directly given to individual animals by means of a balling gun. They are a complementary feed for dairy cows with the particular nutritional purposes

*reduction of the risk of milk fever and  
reduction of the risk of ketosis/acetonaemia*

formulated according to the list of intended uses of animal feedingstuffs for particular nutritional purposes.

## Significance and biological functions

Both ketosis and milk fever in dairy cows, particularly before and after calving, are triggered by fat metabolism disorders which might be concomitant with a considerable damage on the liver. The reason for that are feeds which are not properly balanced or are deficient in glucose supplying energy sources and essential minerals and micronutrients.

VeyFo Q Ca-Formate Caps contain calcium of Ca formate which is rapidly available thereby directly increasing the Ca concentration in the rumen. As a further important component, vitamin D<sub>3</sub> promotes Ca mobilisation whereas Mg sulphate specifically aims at achieving the electrolyte balance.

## Dosage/feeding recommendations

Feed 1 capsule immediately before or after calving and 6 - 12 hours later one more capsule.

The dosage may be increased to 2 capsules each if necessary.

Recommended feeding duration: Beginning with the first signs of parturition up to 2 days after parturition.

It is recommended that a nutritional expert's opinion be sought before feeding the product.

Owing to its increased level of vitamin D<sub>3</sub> content, the product is to be fed to dairy cows only up to 2 % of the daily ration.

## Package size

Box with 6 capsules of 100 g

# VeyFo® Q Veyxapron Caps



## Conception/essential components for the nutritional purpose:

Capsule containing sodium propionate, dried yeast and wheat semolina bran to stimulate rumen motility

## Product characteristics

VeyFo® Q Veyxapron Caps have been formulated with thoroughly selected components meeting the requirements for the particular nutritional purpose. The capsules are directly given to individual animals by means of a balling gun. They are a complementary feed for dairy cows with the particular nutritional purpose

*reduction of the risk of ketosis/acetonaemia*

formulated according to the list of intended uses of animal feedingstuffs for particular nutritional purposes.

## Significance and biological functions

High-yielding dairy cows suffer from a considerable metabolic stress, particularly during the first weeks after calving.

Even high amounts of concentrated feed required during this phase cannot always prevent energy deficits. Frequently, however, they result in disorders of the acid-base balance in the rumen and consequently to a raised incidence of ketosis as well as secondary digestive disorders. During this period, it is most important to supply feed with a high energy conversion efficiency and with pH-regulating nutrients.

VeyFo® Veyxapron Caps is a formulation which on the one hand provides the required energy and on the other hand maintains or restores the physiological activity of the rumen. Accordingly, feeding this product can prevent or alleviate indigestion caused by ruminal disorders.

The yeasts contained in the product play an important role in stimulating and maintaining ruminal peristalsis.

## Dosage/feeding recommendations

1 capsule twice daily

The dosage may be increased to 2 capsules each if necessary.

Recommended feeding duration: Immediately after calving or during the first 3 – 6 weeks of lactation.

It is recommended that a nutritional expert's opinion be sought before feeding the product.

The application of this product also supports the veterinary treatment of ketosis/ acetonaemia for the purpose of ketosis convalescence. VeyFo® Q Veyxapron Caps significantly contribute to the recovery of rumen activity and thus to the re-activation of the rumination process per se.

## Package size

Box with 6 capsules of 60 g

Besides the newly offered formulation as capsules, the proven complementary feed VeyFo® Veyxapron continues to be available as dried powder preparation in 2 different sizes: 100 x 100 g sachets as well as 5 kg bag.

Thus, we offer you a product selection for various farm sizes and different practical applications.

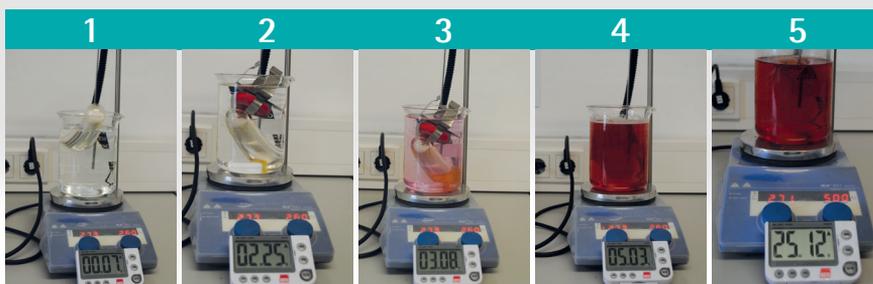
Detailed information on VeyFo® Veyxapron as dried powder preparation can be taken from our product brochure D2.

## VeyFo® Q Caps – capsules rather than boli or ready-to-use solutions

The new VeyFo® Q Caps are capsules that combine two advantages: the fast availability of a liquid complementary feed with the safe application of a bolus.

The capsules can be easily given by a balling gun. The safe, fast and gentle oral application prevents potential risks for aspiration pneumonia. VeyFo® Q Caps do not cause any chemical burns or irritations of the mucous membranes. As the ingredients dissolve rapidly in the rumen, they are available for the organism without delay.

The dissolution process of VeyFo® Q Caps in minutes:



## Physiology of ketosis/acetonaemia

Ketosis presents a significant problem in both cattle and sheep. Ketosis is a disorder of the carbohydrate metabolism that is characterised by abnormal increases in the ketone bodies in the blood (acetonaemia), urine (acetonuria), milk and the breath, with a reduction in the blood sugar levels (hypoglycaemia) as well as a tendency towards fatty liver degeneration. The resulting clinical symptoms affect above all the digestive system (lactation indigestion) and the central nervous system (principally a depressed state, but sometimes states of excitement). In individual cases a differentiation can be made according to the primary symptoms between a "digestive" and a "nervous form" of ketosis. However, both have the same pathogenesis. Ketosis occurs either alone or as a concomitant complication alongside other diseases (e.g. retained placenta, foreign-body syndrome).

## Identifying ketosis

The suspicion of ketosis in individual animals can be confirmed or eliminated by checking the ketone body content of the urine or the milk. At herd level, animals suspected of ketosis can be diagnosed by evaluating the milk control data (DE KRUIF et al. 1998). Animals which at the beginning of lactation have a high milk fat content (> 5 %) and a low milk protein content (< 3.2 %) with a fat-protein quotient which accordingly deviates upwards may be suspected of having ketosis.

For herd-related assessments, analyses over a period of time (a summary of several milk control results) must be carried out in order to assess as many animals as possible at different stages of lactation. Through these assessments, a general view is obtained of the incidence of ketosis/acetonaemia in the herd and, if necessary, deficiencies in the feed and livestock husbandry can be corrected.

## How does ketosis arise?

There is now general agreement about the causes of ketosis. Both internal factors, specific to the animal itself, and external factors, in particular the feed and digestion, interact closely as the causes of the condition (see Tables 1 and 2).

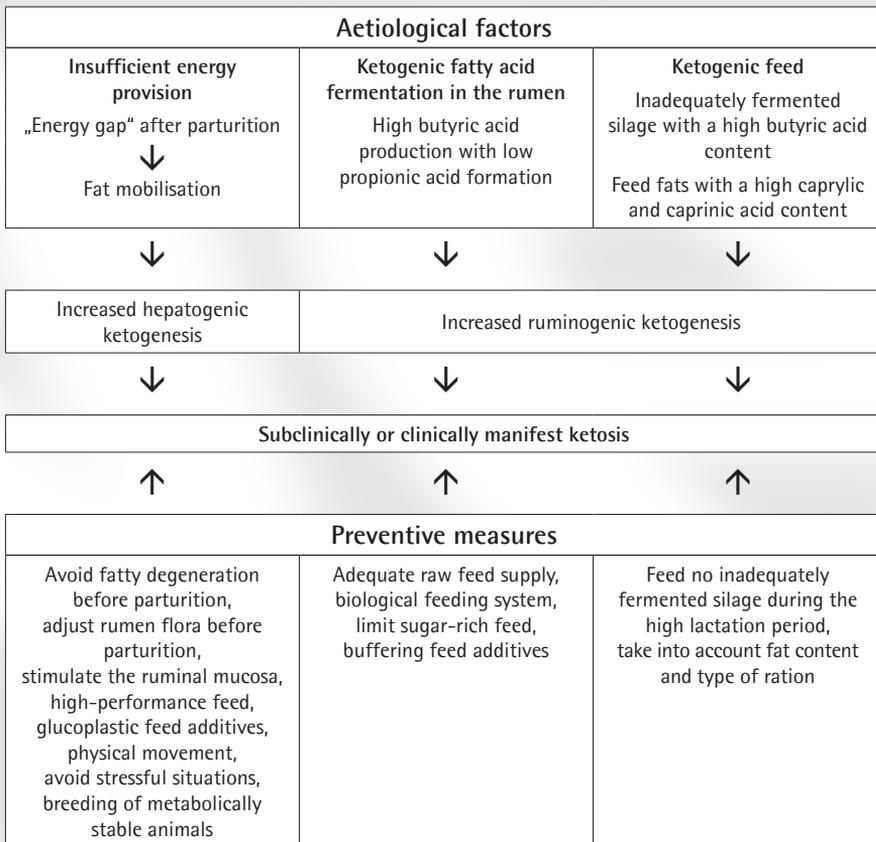
**Table 1: Causes of ketosis in ruminants**

Internal Factors	External Factors
<ul style="list-style-type: none"><li>• High milk yield and uneven lactation curve</li><li>• High increase in fatness before parturition</li><li>• Energy-consuming conditions such as displacement of the abomasum, foreign-body diseases, endometritis puerperalis</li><li>• Primary liver diseases</li><li>• Reduced feed intake after parturition</li><li>• Digestive disorders of various kinds</li></ul>	<ul style="list-style-type: none"><li>• Energy deficit</li><li>• Excess protein</li><li>• Ketogenic feed</li><li>• Ketogenic fermentation in the rumen due to faulty feeding</li><li>• Sudden change in feed</li><li>• Poor palatability of the feed</li></ul>

In particularly serious cases, ketosis may already be apparent in the later stages of pregnancy (gestational ketosis). However, the onset of the disease is far more frequently associated with the beginning of lactation, because the rapid increase in milk yield until the 5<sup>th</sup> week of lactation is accompanied by only a slow increase in feed intake. The maximum feed intake capacity is not reached until the 8<sup>th</sup> to 10<sup>th</sup> week of lactation.

The energy concentration of the feed can only be increased to a limited extent. For a ration to be suitable for ruminants, it has to have a crude fibre content of 18 to 22 %. This means that greater quantities of concentrates would be needed. Such high quantities of concentrates would, however, force the crude fibre out of the diet. This is a dilemma which is difficult to resolve. The energy deficit which inevitably develops is compensated for by the breakdown of body fat reserves. This produces acetyl-CoA, which, bound to oxaloacetate, is used to gain energy. However, oxaloacetate is also the basis for the synthesis of lactose. The lactose content of the milk is constant so that with an increasing milk yield, less oxaloacetate becomes available for gaining energy. The acetyl-CoA which cannot then be used is „disposed of“ as so-called ketone bodies in the form of acetoacetate,  $\beta$ -hydroxybutyric acid or acetone. These ketone bodies represent a serious burden for the cow's metabolism, resulting in the clinical picture of ketosis.

**Table 2: Connection between feeding and ketosis and preventive measures**



## Nutritional significance of vitamins and minerals

The significance and the biological functions of the components contained in the product can be summarised as follows based on the available expert literature and practical experiences – among others the AWT series "Vitamins, minerals and amino acids in animal nutrition".

**Calcium (Ca)** is an important component for bones and teeth. It also acts as activator of various enzymes. It is also needed for the stimulation of nerves and for muscle contractions. Particularly high-yielding cows are not able to mobilise sufficient calcium from the skeleton after calving which might be the cause for milk fever (parturient paresis). Calcium formate (the calcium salt of formic acid) provides a particularly suited Ca source having a high content, ensuring a good resorption through the digestive system and showing excellent compatibility (no burn or irritation of the mucous membranes). When assessing deficiency symptoms, the ratio of other trace elements (phosphorus, magnesium) and a sufficient provision of Vitamin D have always to be taken into account.

**Magnesium (Mg)**, like calcium and phosphorus, is also involved in the development of bones and teeth as well as in many processes of the energy metabolism. Magnesium controls the normal function of the central nervous system and plays a decisive role in the performance of muscular activity. A deficiency of magnesium very often is the cause of grass tetany in high-yielding cows.

**Phosphorus (P)** acts as skeletal building block, buffer substance in the blood and cell, essential component of nucleic acid and various lipoids or proteins. It is necessary for the production, storing and utilisation of energy and facilitates hormone function. Sufficient provision of phosphorus is the prerequisite for the intake of calcium and prevents high concentrations of liver and muscle enzymes as well as of bilirubin and free fatty acids in the blood. It thus contributes to the protection of the liver and muscles. Phosphorus deficiency leads to reduced feed intake, retarded growth, reduced milk yield and ultimately (energy metabolism disorders) also to reproductive disorders. Rickets (inadequate mineralisation of the bones) and osteoporosis, brittle bones, respectively (high removal rates of Ca and P from the skeleton), can be caused by phosphorus as well as vitamin D<sub>3</sub> or Ca deficiency. In order to maintain a limited environmental impact through the excretion of excrement, a formulation is to be favoured in which its release into the body cells occurs with low levels of loss. This is achieved in a particularly reliable way with organic compounds such as sodium dihydrogen phosphates.

**Vitamin D<sub>3</sub>** regulates calcium and phosphate metabolism and particularly promotes calcium and phosphate absorption in the intestine. It controls the excretion of calcium and phosphate via the kidneys and the storage of calcium and phosphate in the skeleton.

It promotes gene expression, increases the performance of the immune system and inhibits auto-immunisation. It controls the transcription of genes.

**Vitamin E** (tocopherol) plays a decisive biological role for the muscle metabolism and controls the development and function of the gonads. Because of its antitoxic effect it also acts as protector. Fertility disorders, a tendency for abortion and muscular degeneration (white muscle disease) might be caused through a Vitamin E deficiency. Vitamin E in close relationship with selenium plays a key role in udder health as it protects the sensitive cell membranes from oxidation thus achieving improved resistance to mastitis pathogens.

## High performance animals require optimised feeding regimes.

We want you to be successful and do our utmost to achieve this target. All constituents contained in the capsules of our Q line are well known in animal nutrition. They are also used as nutritional supplements in humans. Quality and processing meet the highest purity criteria thus achieving a long shelf-life as well as a trouble-free application of the same.

## Notes

Keep out of the reach and sight of children. Store in a cool and frost-free place.

In order to achieve a clear separation from our animal care and veterinary medicinal product lines we exclusively market and label all our feed specialities that are subject to the feedstuff law – as the present ones – under the umbrella brand „VeyFo®“. They are no medicinal products and need not to be entered into the stable treatment diary.

The information given in this product brochure corresponds to the state of knowledge upon completion. Please read the information of the relevant cardboard box prior to using the products.

Veyx-Pharma is GMP-, QS- and VLOG-certified.

Veyx-Pharma GmbH · Soehreweg 6 · 34639 Schwarzenborn · Germany  
Phone 0049 5686 99860 · E-Mail [zentrale@veyx.de](mailto:zentrale@veyx.de)  
[www.veyx.com](http://www.veyx.com)

01/2022