

# OXYGENATED MILK HELPED TO SAVE THE LIFE OF COLIC CALVES

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ECOserves makes a number of different formulations of stabilised activated oxygen products aimed at oxygenating farm animal drinking water, soil, liquid manure, treatment water, etc.



MetO2 is the name of the product used for oxygenating drinking water for animals.

Last week I wrote an article on LinkedIn (*Stabilised liquid oxygen can eliminate the usage of antibiotics in farming* – Link in LinkedIn: <https://lnkd.in/eQMcz6Yh>) about the benefits of oxygenating drinking water of chicken and pigs. Increasing the water's oxygen level significantly boosted chicken and pigs immune system<sup>1,2</sup>, whereby constant dosing or preventative dosing of antibiotics may be a thing of the past.

Since then new and interesting developments have taken place.

## MetO2 in newborn calves milk

It all started with a WhatsApp message from a dairy farmer: *"I have 2 calves with colic. How much MetO2 in a litre milk?"*

For some background information, this farmer recently started using MetO2 in his cow's drinking water and is experiencing excellent results: increased herd health, economic benefits that far outweigh the cost of the products, etc. - and is therefore very enthusiastic about the use of "oxygen".

However, I have never previously added MetO2 to milk for calves. In any case slightly oxygenated milk cannot do any harm – and as the farmer said: they will die anyway if nothing is done and he believed in it. I messaged back that I had no experience in doing this but if he wanted to try that the dosage should 0.5 ml in 10 L. Message sent! I did not expect to hear anything further.

### The next day...

The next afternoon I received a WhatsApp message with a film of two calves in separate holding pen looking perfectly normal.

Underneath the film was the explanation: Yesterday these 2 calves couldn't stand up and were very sick with colic. We started antibiotic treatment and dosed their milk with MetO2 as directed. Today (the day after) they look like nothing's happened. All of our previous calves that had colic died.



*Figure 1 - One of two calves that recovered from colic in the video sent to me by the farmer*

<sup>1</sup> Oxygenated drinking water enhances immune activity in pigs and increases immune responses of pigs during Salmonella typhimurium infection - Bock-Gie Jung 1, Jin-A Lee, Bong-Joo Lee - College of Veterinary Medicine, Chonnam National University, 300 Yongbong-dong, Buk-gu, Gwangju 500-757, Republic of Korea.

<sup>2</sup> Oxygenated drinking water Enhances Immune activity in Broiler Chicks and Increases Survivability against Salmonella gallinarum in Experimentally Infected Broiler Chicks. Bock-Gie JUNG, Jin-A LEE, Kyoung-Woo Lee. College of Veterinary Medicine, Chonnam National University, Republic of Korea – 13 October 2011

As everyone who's ever taken antibiotics knows, it generally takes 3-4 days before antibiotic treatment starts to show results. So for these 2 calves to recover after 1 day through the combination of antibiotics and MetO2 oxygen is quite extraordinary. Now, a few weeks later their condition is completely normal, and other calves have been treated with the same results.

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#### **MORTALITY RATE OF COLIC:**

**Reports from veterinary hospitals indicate that acute abdominal emergencies (Colic) in calves are associated with a guarded prognosis with reported mortality rates around 76%. Colic Mortality is followed closely by pneumonia..**

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The major problem with the use of antibiotics in calves is that calves have very little immunity and that antibiotics generally take too long to be effective as newborn calves just don't have the resistance to last 3-4 days until the antibiotics are fully effective.

#### **THE ROLE OF OXYGEN IN THE BODY:**

Oxygen probably deserves the title of most important element in life be it for humans, animals or plants. Yet it is severely underestimated! It is the most common element in the human body, making up 61% of the average human's mass (this also applies to animals). In addition to being a constituent of DNA, it is also plays a role in most other biological processes in the body.

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**But the fact is that we do not yet understand all of the roles that oxygen plays in the body.**

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#### **MY HYPOTHESIS OF WHY OXYGEN WAS IMPORTANT FOR HELPING THESE CALVES SURVIVE COLIC:**

Over the past few years I have read a lot of literature and research papers with regards to the role of oxygen in soil, plants, animals, humans, and have worked intensively in numerous applications in which adding stabilised liquid oxygen proved hugely beneficial, saved the farmer money, earned him money or both.

The one conclusion I can make with certainty is that oxygen plays a far bigger role than we think. Fact is that even after 30 years I am still learning and still regularly get amazed by some of the results we obtain. In most cases the highest benefits are obtained with very low levels of oxygen.

Another aspect is that there is relatively little research with regards to oxygen applications in agriculture. Most of the uses I have developed are applications that have never been researched yet we see enormous benefits for farmers, for animals, crops, soil and the environment.

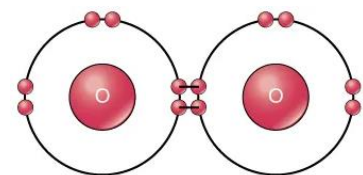
#### **SO WHAT ABOUT THE CALVES:**

1. With these calves my theory is that the small boost in milk oxygen helped to boost/trigger the calves immune system. It is now generally accepted that the stomach plays a major role in the immune system. Oxygen may simply help to trigger this faster.

### **(Molecular) Oxygen**

Chemical element

Oxygen is the chemical element with the symbol O and atomic number 8. It is a member of the chalcogen group in the periodic table, a highly reactive nonmetal, and an oxidizing agent that readily forms oxides with most elements as well as with other compounds.



Molecular oxygen is diatomic oxygen having the symbol O<sub>2</sub>. It has two oxygen atoms and eight electrons around them.

2. The oxygen made the antibiotics function much faster and effectively than usual.
3. Hypoxia<sup>3</sup> - Hereabove it is stated that the oxygen makes up 61% of a body's mass. Could it be that at birth this was below this level whereby many body functions did not operate optimally. This would significantly affect the calves ability to fight off any disease. And although calves stomach are mostly anaerobe, we do know that a small amount of oxygen is required to make it work optimally.

**MORE RESEARCH WILL EVENTUALLY EXPLAIN WHY IT WORKS BUT FARMERS WILL USE IT BECAUSE IT EARNS THEM MONEY AND BENEFITS THE GENERAL HEALTH OF THEIR HERD**

As I stated above research will eventually explain why small amounts of oxygen helped calves survive colic and probably other diseases they get in the initial week of their lives. It will eventually explain that oxygen can help prevent these issues.

There is also research to be done as to why so many economical and health benefits occur when MetO2 is dosed into the drinking water of (dairy)cows and goats. MetO2 is already dosed into the drinking water of nearly 100.000 cows in the Netherlands and will soon be going across the borders to other countries.

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<sup>3</sup> Hypoxia is a state in which oxygen is not available in sufficient amounts at the tissue level