

orgacell sc mb

1 feed supplement, 4 components:
yeast (living and inactivated), mycotoxin binding agent and phenol



- stabilizes the rumen, especially if animals are stressed
- supports feed intake
- **special phenolic flavoring**
- contains bentonite, which binds the mycotoxin aflatoxin B₁ in cattle, pig or poultry keeping
- high amount of live yeast 2000 × 10⁹ CFU/kg
- relieves the liver

the live yeast will stay inactive until it enters the rumen, all while remaining protected from air, moisture and fermentation acids.

A well-functioning rumen is the prerequisite for healthy, high-performing, fertile cows.

Therefore yeast has long established benefits in animal feeding. Numerous trials confirm its effects on fibre digestion, animal health and performance.

Mycotoxin catcher – the safeguard

Our live yeast product **orgacell sc[®] mb** combines the positive effects of live yeast, inactivated yeast and phenol with aflatoxin B₁'s ability to bind bentonite.

Bentonite and phenol

Both substances have an immediate effect on cell counts: these often drop after just a few days. In addition, bentonite can lower the urea content of milk. Phenols, on the other hand, can improve fertility. Prerequisite: regular feeding of **orgacell sc[®] mb** over a longer period of time.

Yeast improves animal health

The live yeast in **orgacell sc[®] mb** consists of spheres of live yeast cells, coated by a layer of inactive yeast. This ensures that

Fibre digestibility

Despite a comparatively low daily dosage, the positive effects of yeast in the rumen are quite significant. Positive effects on fibre digestion may be seen in the faeces' composition after approx. 4 weeks. Less feed residue means that more nutrients will be at the animals' disposal.

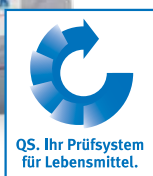
Feeding

Dairy cattle: 20 g per animal per day
 Start 4 weeks before calving and continue feeding throughout lactation and up to the dry period.

Beef cattle: 35 g per animal per day

Calves for rearing: 10 g per animal per day

Packaging: 20 kg bag

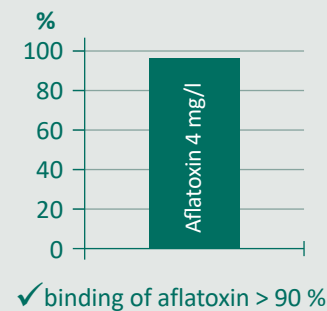


A practical test from the Czech Republic showed the following results

All measured values have improved significantly: Less lactate and more fatty acids indicate a reduction in the risk of acidosis and an optimization of rumen processes. At the same time, the increase in fatty acids ensures a higher energy yield from the feed. Together with the increased glucose content, this leads to more milk in the tank. The beta-Hydroxybutyric acid value (BHBA in the blood) provides information about the energy balance. The higher it is, the more critical the ketosis risk. The low value shows that the live yeast has relieved the cow's metabolism.

	Untreated	Live yeast
pH value	6.4	6.6
lactate	16.4	9.3
fatty acids	104.7	112.0
∅ amount of milk ECM	37.0	39.4
glucose	3.2	3.3
BHBA	0.6	0.5

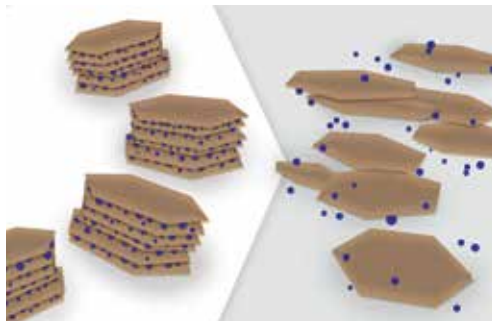
Aflatoxin B₁ adsorption (intensified binding study at a pH level of 5, EURL method)



✓ binding of aflatoxin > 90 %

source: independent laboratory, trials effected according to EURL method

Bentonite as a binding agent



Bentonite has a smectite content which is $\geq 70\%$ and has been approved by EFSA (European Food Safety Authority) as a

mycotoxin binding agent for aflatoxin B₁. Clay minerals such as bentonite consist of individual silicate layers which lie on top of each other like leaves. The space between the layers provides room for foreign ions and molecules. Smectite has a particularly large inner surface of 600 - 800 m² per g and is as such able to accommodate organic complexes like myco- or endotoxins and extract them from the animal.

The erratic mycotoxins

Fungi can grow not only in the field, but also during storage of the basic feed. Thus, there is hardly any feed that is completely free of fungal contamination. According to climate, several different toxins may be found in the feed and more often than not, their harmful effect increases. According to the rumen's condition, microorganisms can render some of the mycotoxins innocuous. If the contamination gets too high or the animal

is weakened this will result in a drop in performance, anorexia, a shaggy coat and in most cases an increased cell count due to the increased immune response of the udder. A continuous, prophylactic administration of mycotoxin binding agents relieves the cow's organism and thus ensures animal health. **orgacell sc[®] mb** is completed by the yeast components, which have an additional positive effect on the rumen.



Phenols

orgacell sc[®] mb contains a standardized phenol component. Phenols have the ability to render free radicals harmless. Free radicals have negative effects on animal health and are for example produced, if the animal is exposed to heat, a high level of stress, needs to deliver a high level of performance or is giving birth.

Using phenols has shown that less vitamin E and selenium is wasted as radical scavengers (antioxidants). This prevents vitamin E or selenium deficiencies and ensures that these important substances are at the animal's disposal for growth, fertility and other tasks.

Yeast

Inactivated yeast contains enzymes and B vitamins (among others) and has a positive influence on the intestinal microflora. Certain substances of the

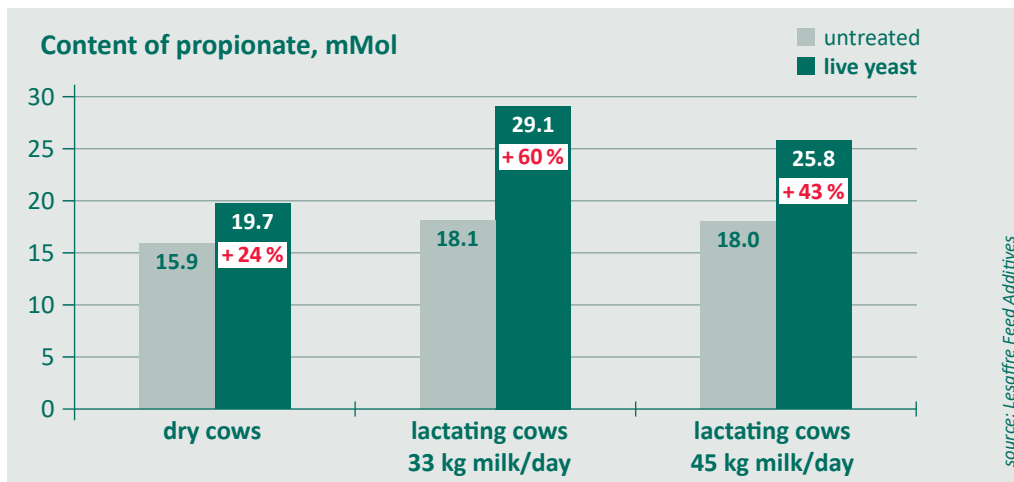
yeast cell walls have binding properties and activate the animals' immune defence.

Effect of the live yeast *Saccharomyces cerevisiae* in the rumen

Consumes the oxygen in the rumen

Live yeast reduces oxygen, so the number of cellulose-degrading microorganisms increases. This may be observed in the animals' manure after just a short period of time: fibre and kernel residue is reduced.

As live yeast binds the oxygen, a higher amount of free hydrogen will be available for the formation of propionic acid. In the liver, this acid is subsequently transformed into the energy source glucose.

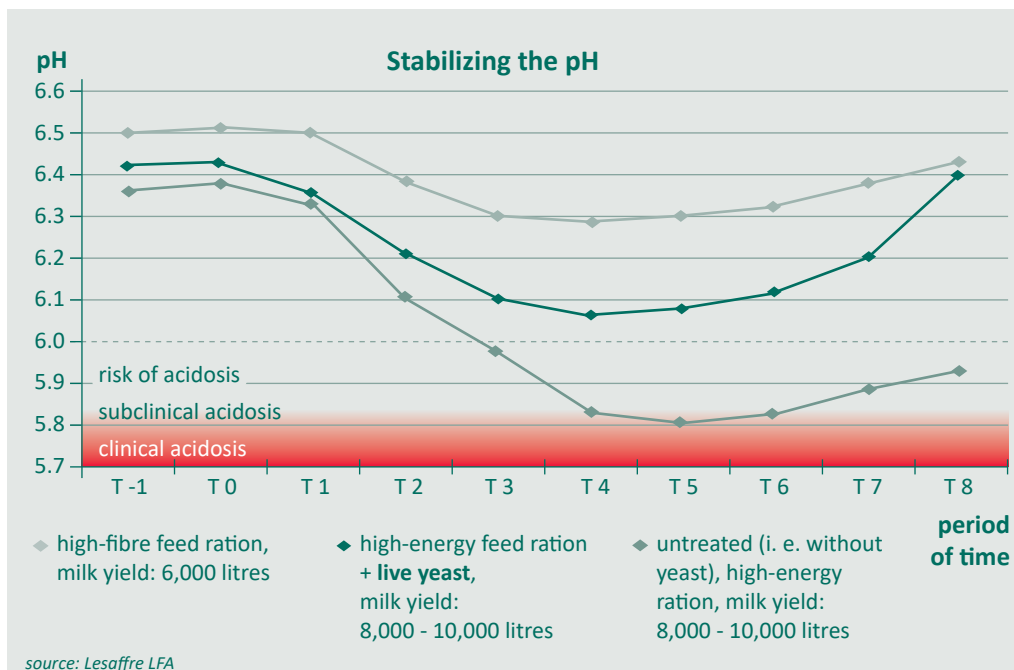


Sieve test

Using the simplest of means, the sieve test provides the easiest way to see the effects of feeding live yeast. Put a sample of manure in a common kitchen sieve and rinse until the water runs clear. The undigested feed components will remain in the sieve. The amount and type of the residue shows the digestion's intensity. After 3 - 4 weeks of feeding **orgacell sc® mb**, repeat the test.



Keeps the rumen pH value in the optimal range



Through the feeding of live yeast the amount of residues is significantly reduced – especially the amount of undigested maize kernels is significantly reduced.



A high-capacity rumen features a dense "lawn" of villi. Low pH values can really burn the rumen villi due to acid, so that the "lawn" gets holes and feed digestion deteriorates.

Ruminal pH is kept at the required level thus protecting the mucosa and microflora.

Ingredients and their effects

Bentonite

binds mycotoxins

→ improves animal health, especially udder health (cell count)

ejects toxins

→ protects the organs, especially the intestine

Immediate effects, which is why effects like a reduced cell count are often noticeable after just a few days; if applicable, the content of urea will decrease within 2 - 3 weeks.

Phenol

catches free radicals

→ reduces stress, more vitamin E and selenium are available

relieves and activates the immune system

→ more energy for a high performance, strengthens the body's natural defences, reduces susceptibility to infection, supports udder and overall animal health

Rapid effects on the udder, which is why effects like a reduced cell count may already be observed after just a few days.
Evaluation of improved fertility only after more than 3 months.

Inactive yeast

cell walls

→ binds toxins and pathogens

activates the immune system

→ strengthens the body's natural defences

broad spectrum of aminoacids

→ high quality protein for ruminal microbes

micronutrients

→ B vitamins, biotin, organic micronutrients

Rapid binding of toxins and pathogens, positive effects on ruminal microbes (after approx. 4 weeks).
Observe changes in cell count and fur.

Live yeast

binds O₂

→ supports beneficial ruminal bacteria

steady pH

→ improves fibre digestion, increases milk fat content, improves hoof and overall animal health, detoxifies

more propionic acid

→ more energy from the feed

more microbial protein

→ high quality protein for milk production

It takes about 4 weeks for the effects on ruminal microbes and the ruminal environment to take hold.
Observe composition of faeces: Less feed residue in the faeces.
Observe content of urea.
Observe beginning of lactation and stability on changing the feed.

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