# Green Chemistry

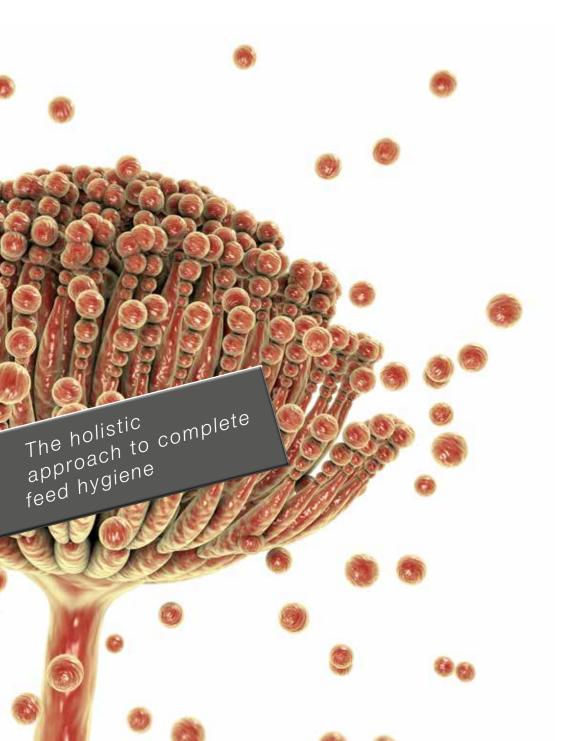




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# **ADDCON ProFeed**

preserves compound feed and deactivates mycotoxins.



## The hidden danger to optimal feed quality

Waste not – want not! Optimal feed quality and storage can play a major part in providing sufficient amounts of food to the ever-growing population on our planet. It is estimated that between 30-50% of all food produced on the planet is lost before consumed. Several aspects play a role in this huge wastage; among them inadequate storage and the worldwide contamination with mycotoxins of staple crops and compound feed.

With growing global feed and food chains, the mycotoxin risk may increase due insufficient storage and transport conditions across changing climate zones (FAO). The issue of mycotoxins is by far no longer an issue in developing countries, but mycotoxins generated a high number of reports on the European Commission's Rapid Alert System for Food and Feed safety as well.





### The holistic approach to complete feed hygiene

The quality of feed is no longer appreciated only in terms of supplying nutrients to the animal, but also regarding its hygienic status with direct effects on animal health and finally food safety. Unsafe feed containing harmful bacteria, viruses, parasites or toxins, causes more than 200 diseases – ranging from diarrhoea to cancers. However, bacteria and fungal growth is ubiquitous – thus is the presence of their metabolites (e.g. mycotoxins). Therefore, contaminated feedstuffs and raw materials result in significant losses in productivity, if not severe outbreaks of disease, as a result of microbial and fungal contamination. Feed safety, nutrition and food security are inextricably linked. Unsafe feed creates a vicious cycle of disease and malnutrition. Bacteria and moulds reduce for instance the nutritive value of feed by up to 5% for energy and even 7% for crude protein.





# PREVENTION & DETOXIFICATION leads to complete feed hygiene!

Driven by research from the United States and Europe, ADDCON developed a holistic approach to feed hygiene – by tackling the impact of bacteria, yeasts and moulds as well as their metabolites to compound feed simultaneously – following a prevention and detoxification approach. This led to the formulation of ADDCON ProFeed.

ADDCON ProFeed stands for:

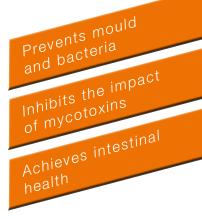
- easy handling and mixability
- very strong anti-fungal and anti-bacterial effects
- detoxification and binding of mycotoxins

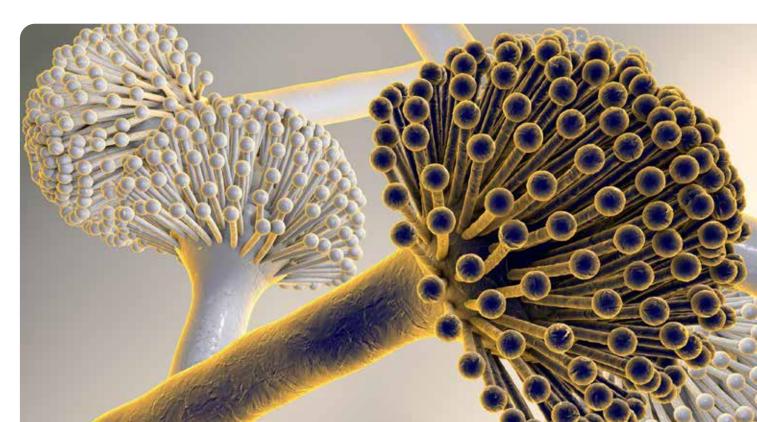
The holistic approach to complete feed hygiene satisfies the need of modern, sustainable animal production. The combined anti-fungal, anti-bacterial and detoxifying effects are beneficial for the feed and animal in many respects:

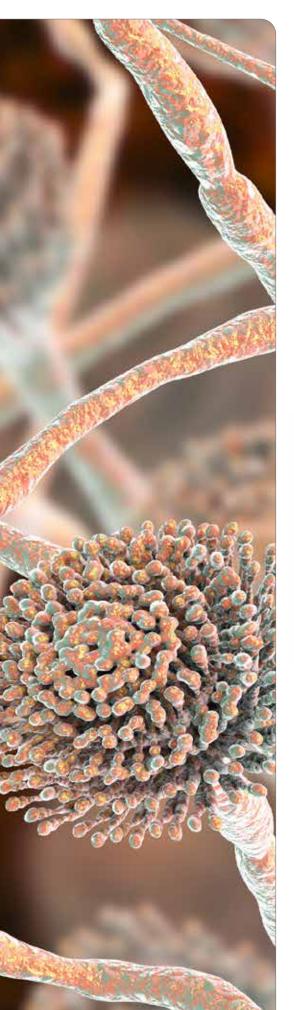
- ADDCON ProFeed prevents and stops the spread of moulds and bacteria in the feed
- ADDCON ProFeed targets undesirable substances, such as endo- and mycotoxins
- ADDCON ProFeed stabilises feed quality and leads to intestinal health

Table 1: Effect of propionic and formic acid against fungi and bacteria

Fungi / bacteria species	MIC (%)
Aspergillus niger	0.25
Aspergillus flavus	0.25
Penicillium expansum	0.13
Fusarium nivale	0.13
Salmonella typhimurium	0.10
Escherichia coli	0.15
Campylobacter jejuni	0.10







# Impact of ADDCON ProFeed on various mycotoxins.

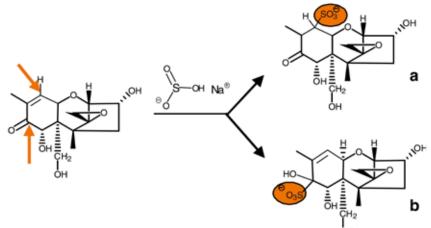


Figure 1: Impact of ADDCON ProFeed on DON–detoxification to DON-sulfonate (after Dänicke et al.)

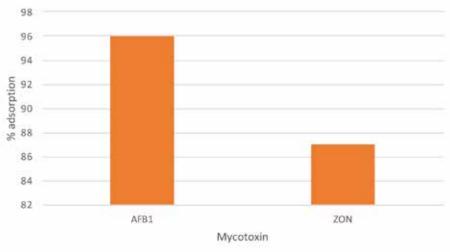


Figure 2: Impact of ADDCON ProFeed on AFB1 and ZON

Table 2: Binding effect of ADDCON ProFeed an various mycotoxins

Inhibition efficiency (%)
96
87
61
58
51

# **ADDCON ProFeed**





Numerous trials have shown that the *holistic approach* on PREVENTION & DETOXIFICATION leads to hygienic feed, which prevents losses during storage and outfeed.

The use of ADDCON ProFeed under practical conditions worldwide shall be therefore part of a new feeding concept, with the highest hygienic status of feed – providing a safe and sustainable "from farm to fork" approach.





### **Technical Data**

#### **Composition:**

Calcium and sodium salts of organic and inorganic acids, activated clay

#### Storage:

ADDCON ProFeed must be stored in a dry, cool (frost-free) and dark place. Shelf life of sealed original packages min. 2 years from production date

### Packaging:

Paper-bag – 20 kg and 25 kg net

#### Dosage:

ADDCON ProFeed is used at 1 - 3 kg/t depending on raw material quality, level of mycotoxins, storage conditions and -length Piglet / fattening pigs: 1 - 3 kg/t of compound feed SOWS: 2-3 kg/t of compound feed Broiler: 1 - 3 kg/t Layer: 2 - 3 kg/t of compound feed Dairy cows: 2 - 3 kg/t of compound feed

For further information or the material safety data sheet please visit our website or send us a direct request:

Certification





ADDCON -EU-hygiene regulation 183 / 2005: g-Nr. Bitterfeld: DE ST 100033, DE ST 100024 α-No. Porsgrunn: α NO 10050081

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