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WHAT IS KATALFIX ?

KATALFIX is a high quality organic product, containing non-digestible carbohydrates, enzyme complexes and carefully selected yeasts, cocci and bacilli to stabilize, sanitize and dehydrate all kinds of organic waste.

Moisture reduction nith no external energy cost

Nitrogen fixation

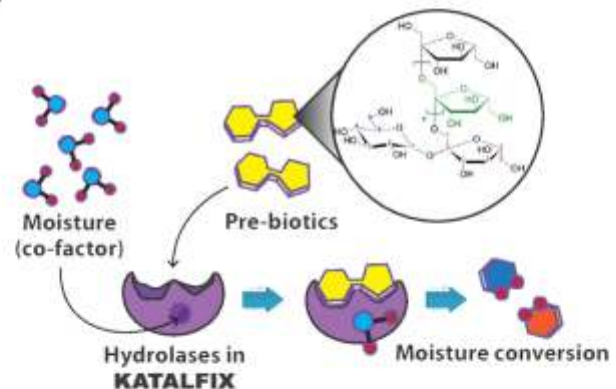
Improved animal health

- Non-digestible carbohydrates: pre-biotics
- Enzyme complexes
- Yeasts 20t CFU/mL
- Bacteria: Celulolytic micro-organisms: $1,5 \times 10^6$ UFC/mL
Proteolytic micro-organisms: $6,0 \times 10^5$ UFC/mL
Amiolytic micro-organisms: $5,0 \times 10$ UFC/mL

STRONG MOISTURE REDUCTION:

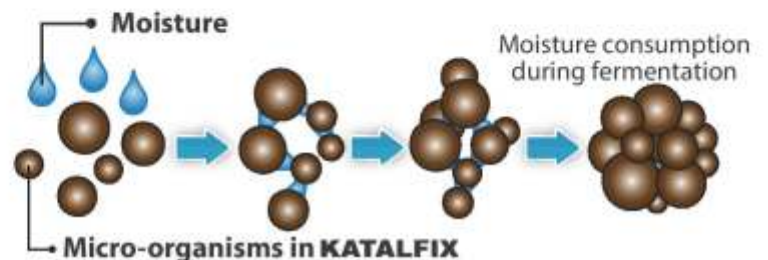
Enzymatic moisture reduction:

KATALFIX contains prebiotic, non-digestible carbohydrates that can be used as substrate for the many hydrolase enzymes present in KATALFIX. With every enzyme catalytic action, two water molecules are used, thereby reducing moisture content signi? cantly.



Fermentation for moisture reduction:

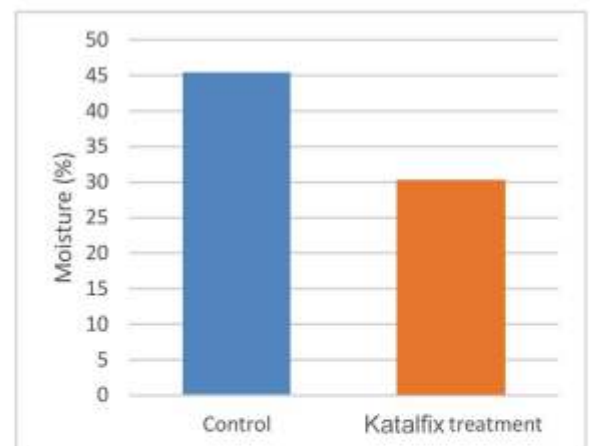
KATALFIX contains many gram positive and negative cocci and bacilli which are selected for their fermenting properties. They use, just like the hydrolase enzymes many carbohydrate rich sources, including the prebiotic carbohydrates in KATALFIX, and carbohydrates in manure. Because of their high fermentation capacity, moisture is consumed very fast which results in many bene? cial e? ects including health properties for the animals (less footpad leasions or breast blisters) and no external energy needed for drying manure as fertilizer.



✓ LESS FOOTPAD LEASIONS OR BREAST BLISTERS

✓ NO EXTERNAL ENERGY SOURCE NEEDED TO REMOVE EXCESS MOISTURE

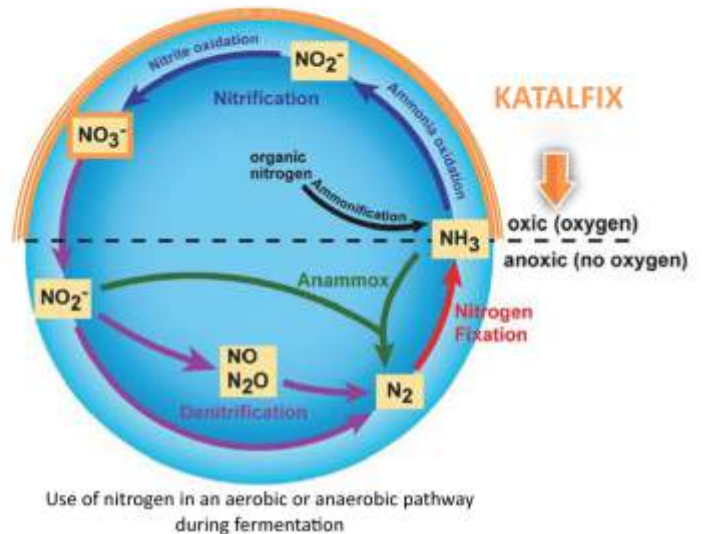
A trial was performed in a stable with 10 240 broilers (35 broilers / m²) divided in two groups (one control and one treated with KATALFIX). Results showed that manure treated with KATALFIX had 15,6% % less moisture, compared with non-treated manure.





NITROGEN FIXATION

Traditionally, Nitrogen (N) coming from proteins, urea,... etc. present in manure is used mainly in an anaerobic way by environmental biota. This pathway of nitrogen processing results in the transformation of nitrogen into ammonium molecules (NH_4^+), which are rapidly converted to ammonia (NH_3). Ammonia on its turn evaporates quickly and is a major cause of airway irritation, that leads to inflammation after prolonged exposure. KATALFIX contains micro-organisms that grow in an aerobic way instead of anaerobically. This aerobic pathway includes use of oxygen while processing nitrogen. This results in the formation of Nitrite in a first step, and eventually in the more stable Nitrate. Nitrate does not evaporate, keeping the nitrogen in the manure and increasing its potential for fertilizing crops, and is not as toxic as ammonia.

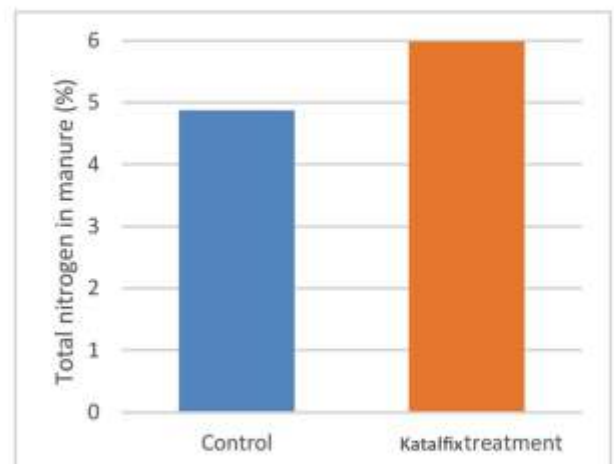


Use of nitrogen in an aerobic or anaerobic pathway during fermentation

✓ IMPROVED FERTILLIZER QUALITY

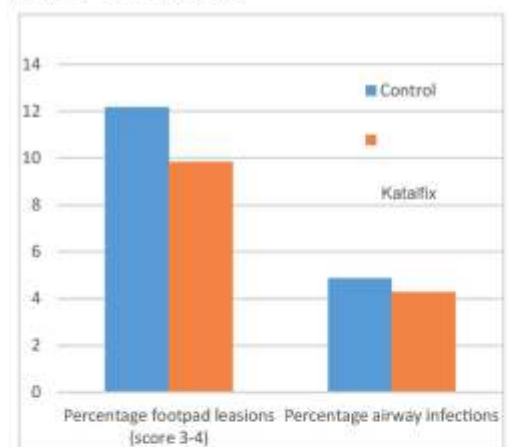
✓ LESS AIRWAY INFECTION

A trial was performed in a stable with 10 240 broilers (35 broilers / m²) divided in two groups (one control and one treated with KATALFIX). Results show that manure treated with KATALFIX had 22,8% % more nitrogen compared with the control group, indicating that less nitrogen was volatilized as ammonia and the manure achieved a higher fertilizing capacity.



LESS FOOTPAD DERMATITIS AND AIRWAY INFECTION

High moisture content as well as high ammonia levels severely affect animal health. Wet litter irritate footpads leading to footpad dermatitis while the severity and number of airway infections increases with higher ammonia levels. A trial was performed on 18 250 broilers to verify the influence of KATALFIX on both footpad dermatitis and airway inflammation. Broilers were divided in two groups (one control and one treated with KATALFIX). Results showed that KATALFIX treatment could reduce footpad lesions (score 3-4) with 19,3% compared with the control group. Airway infections, either microbial (e.g. e. coli) or viral (e.g. Newcastle disease, avian influenza,...) decreased with 12,2% compared with the control group.



HOW TO USE

KATALFIX is standard used at a rate of 1 L per ton manure. The operator generally carries about 15 L Katalfix per load (sprayed over 15 tons). In a typical work day 100-150 tons can be treated.

