

Phytogenics:

Green powerhouses amongst the available additives

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The growing demand for more animal-friendly production has developed into a global phenomenon. Animal welfare organisations, food retailers and consumers are all calling for solutions to improve animals' well-being. Relevant efforts have often been focussed on production systems and management. However, there are many other ways to improve animal welfare. Examples thereof are breeding, transport, medication and, most of all, feeding. The common denominator in all these is that they require investment. The obvious question is: What's the bottom line? We need solutions to increase animal welfare and profitability at the same time. And this is where phytogenic feed additives come into play.

From nature, for nature

Antibiotics are still the typical product of choice in many countries, since they appear to be a safe bet to ensure profitability. Their use in feed throughout the decades has shown that production can be increased by suppressing negative environmental factors. The penny has dropped: we have finally come to realise that this is not the way to go. In fact, it is a dead end. The incidence of antibiotic resistance, constantly on the rise, puts even more pressure on the production chain.

The focus on animal welfare in modern agriculture is no mere trend but a requisite, both from an ethical and from an economic point of view. It is a far-reaching issue that concerns all stakeholders in the food value chain, including suppliers, retailers and consumers.

Considering that feeding is the first link of the production chain, it seems logical to intervene at this level to improve animal welfare. Research has shown that feed additives can have a positive effect on animal welfare. And here, phytogenic substances are in the vanguard. Meanwhile, a number of studies have shown that combinations of phytogenic active ingredients could effectively replace antibiotics, preventing bacterial resistance and improving safety and animal welfare.

Depending on their components, phytogenics possess a broad spectrum of activities. For example, some support gastrointestinal health, others are anti-inflammatory. And they can achieve even more. Specific phytogenic feed additives have a positive effect on feed digestibility, on the gut microflora and, last but not least, on growth and performance. Since the available resources are used more efficiently, productivity increases.

Ultimately, it benefits both humans and animals because a healthy gastrointestinal tract improves litter quality, decreases emissions, reduces the amount of medication administered and makes food safer and healthier overall.

Established impact

Let's take the common hop (*Humulus lupulus*) as an example of the numerous phytochemicals. Hop has been used in medicine for thousands of years. It is the ingredient of choice in beer production due to its flavour, antimicrobial and preservative properties. It contains specific phytochemicals with structures similar to those of ionophores—molecules that increase the permeability of cell membranes to ions—which can inhibit gram-positive bacteria, making it a very promising natural alternative to antibiotics in animal feed.

Dr Eckel's innovative feed additives leverage all of this. The German manufacturer's idea of influencing animal welfare through feeding has long been proven to be the right strategy, as amply demonstrated by its products bearing the 'Animal Welfare Inside' seal.

These phytochemical feed additives, which have been specifically developed to improve animal welfare, are truly viable solutions that alleviate stress-related problems, reduce inflammation, support the immune system and ultimately improve animals' performance. Anta®Phyt is a case in point. A phytochemical formulation, containing selected hop components and other plant-based ingredients.

Studies have shown that this feed additive, designed to support a healthy microflora in the digestive tract, has a positive influence on performance parameters such as daily weight gain and feed conversion, as well as animal welfare related parameters.

Feeding to improve animal welfare

Anta®Phyt impacts animal welfare in numerous ways: it reduces *Clostridium* in poultry, *Streptococci* in pigs and pH-lowering lactic acid bacteria in ruminants. The positive effects on

gastrointestinal health can be clearly seen in all animal species. In the case of poultry, the most obvious include drier litter, less footpad lesions, generally less diarrhoea and better feed conversion.

In the case of ruminants, the benefits include reduced susceptibility to subacute ruminal acidosis and decreased somatic cell count in milk. The antibacterial effect of Anta®Phyt can be demonstrated by a standardised *in vitro* test. On the basis of its minimum inhibitory concentration (MIC), it is clear

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that Anta®Phyt can also be used effectively against pathogens frequently found in livestock production, such as *Staphylococci*, *Streptococci* and *Campylobacter*, and *Clostridia*.

Improved well-being and performance in animals, healthier and safer products for consumers, better productivity for producers, more sustainability and protection for the environment: phytochemical additives have great potential. And so far, results and experience show that, in the right combination, they actually deliver!

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