

## Use of fermented protein in reducing the use of antibiotics in pig and poultry

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### Take home messages

- *Poor gastrointestinal health is the root cause of many medical conditions in livestock.*
- *Products that contain lactic acid fermented protein combinations create a range of substances that can break down pathogenic bacteria.*
- *Use of fermented rapeseed, fermented seaweed or fermented soybeans has been associated with reduced antibiotic use in pigs and poultry.*

The emerging resistance of bacteria to antibiotics, including those which are said to be critically important in the treatment of infections in humans, is a significant threat worldwide. Recent studies carried out in the UK has revealed the presence of antibiotic resistant *Escherichia coli* in UK origin pig and chicken meat sold in major UK food retailers which reveal the full extent of resistance to key human antibiotics in *E.coli* present on supermarket meat. Based on these findings the government is working on a reduction target of 50mg of antibiotics for every kg of livestock by 2018.



Recently, a Danish firm **European Protein** (<http://www.europeanprotein.com>) has been working to promote the production of antibiotic-free livestock to help develop sustainable farming. The strategy involves working to reduce the incidence of bacteria and associated disease in livestock through introduction of lactic-acid fermented feedstuffs/products, as an alternative to antibiotics.



Gastro-intestinal health (GIH) is known to be a common source of disease, as its processes affect all other areas of the body. Research has shown that poor GIH is the root cause of many medical conditions. Products that contain lactic-acid fermented protein combinations, whose individual compositions and respective fermenting methods create a range of substances that break down pathogenic bacteria. Examples of such products include *fermented rapeseed, fermented seaweed or fermented*

*soybeans.*

It is important to introduce the products into pig feeding cycles early by giving them to sows. At this stage the products will target endotoxins, which cause diseases such as neonatal porcine diarrhoea. In addition, trials have shown that sows fed with these products generally have better gastro-intestinal health; this in turn improves the health of fetuses and piglets, which are stronger and more uniform at birth. Piglets that get a good start feeding from healthy sows are easier to wean without incidence of diarrhoea. Animals need to reach a weight of approximately 30kgs without such gastro-intestinal problems, as achieving proper feed consumption, growth and good health for slaughter must be problem-free and



efficient. Recent studies conducted in Denmark and Poland reported 10% decrease in use of antibiotics following use of fermented proteins in pigs. Further reduction to zero usage of antibiotics in poultry (chickens and turkey) was also reported.

With the era of resistant bugs which has been projected to cause 1 human death in every 3 seconds by 2050, feeding fermented plant based compounds to monogastrics (animals with simple stomach, for example pig and poultry) could be the most sustainable long term solution in the livestock farming industry.

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