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AB Vista video sheds new light on the positive effects of complete phytate destruction on animal nutrition

A new video from AB Vista reveals details about why complete phytate destruction in the digestive tract may lead to increased growth efficiency in swine and poultry.

The video – the second in the new ‘Extraordinary Science Brought to Life’ series – explains what happens when phytic acid (IP6) is completely broken down by phytase superdosing.

“Complete IP6 breakdown leads to the production of inositol – a nutrient that seems to play a valuable role in improving growth and feed conversion,” says Dr Mike Bedford, Research Director at AB Vista. “And tests have shown that the higher the amount of phytase added, the higher the level of inositol that is generated.

“Poultry studies showed that when phytase superdosing is applied, there is a reduction in the levels of IP6 and its lower esters. As a result there are increased levels of inositol released in the gizzard, which is then absorbed and results in better body weight gain and improved feed conversion. We believe that inositol provision is probably responsible for approximately 30% of the total response seen from superdosing.”

These studies suggest inositol is an essential nutrient that is not supplied adequately in a typical diet, Dr Bedford says.

This video analysis of the benefits of inositol production follows the first video in the series, which looked at the importance of breaking down not only IP6, but lower phytate esters IP5, IP4 and IP3, which can also have anti-nutritive effects.

“Together, the two videos highlight key research that helps to explain why applying higher levels of the right type of phytase can result in animal performance improvements.”

Dr Bedford adds that not all phytases are equally capable of doing this.

“Superdosing gets rid of the phytate ester anti-nutrients, and also provides a nutrient – inositol. In order to achieve this, the phytase has to survive high-temperature pelleting in feed production. It also has to survive the conditions of the stomach, which is where phytases work. Most importantly, however, the phytase has to be able to break down IP6, IP5, IP4, IP3 and IP2, all the way down to IP1 very rapidly indeed. And this has to be done in a quantitative manner; we have to get rid of most of the IP6, IP5, IP4 and IP3, since these are anti-nutrients. But we also have to provide as much IP1 as possible, so that the animal can break that down and produce inositol.”

The new video featuring Dr Mike Bedford (*'Phytase superdosing – where are the benefits coming from? Part two: Inositol release in the animal gut'*) can be viewed on the AB Vista website - www.abvista.com.

For more information, contact AB Vista on +44(0)1672 517 650 or info@abvista.com.

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Notes to editor:

AB Vista is an animal nutrition technology company offering pioneering products and technical services to the global animal feed industry. Since its establishment in 2004, AB Vista has grown to be a top-three player in feed enzymes and is also one of the largest suppliers of natural betaine to the global animal nutrition industry. The company invests heavily in research and development and has a growing portfolio of products and services spanning the poultry, swine, ruminant and aquaculture sectors. AB Vista is headquartered in the UK, with regional offices located in the USA, Brazil, Singapore, Spain, India, China, Germany and Finland.

AB Vista is part of AB Agri, the agricultural division of Associated British Foods, one of Europe's largest food & retail companies with a market capitalisation of £26 billion.

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