



## **INTERVIEW: Growth in Phytase Demand Unrestrained by Feed Phosphate Market Developments**

19 April 2010 - A late March interview published by Feedinfo News Service examined the increasing demand for sources of phosphorus to enhance animal performance in order to meet the forecasted increases in global meat demand.

As previously mentioned, this essential nutrient is found in all animal diets either from inorganic phosphorus sources - such as feed phosphates - or from organic feed ingredient sources. However, most of the phosphate found in plant-derived feed ingredients is unavailable to the animal as it is bound up in indigestible phytate.

Speaking at the recent Phosphates 2010 Conference in Brussels, Dr. Hadden Graham, Technical Director at AB Vista - the feed ingredients division of AB Agri which is the agricultural arm of Associated British Foods (ABF) Ltd – argued that for some animals phytase could replace added inorganic phosphates; a theory which, is contrary to some opinions.

Dr. Graham estimates that more than 60% of the world's production of commercial poultry and swine diets currently contains phytases, with some regional and species variation.

“We would expect penetration to eventually reach 100%, and the value of the phytase market can thus be expected to continue to grow in the future”, he said.

AB Vista, which has a number of phytase products covered by the Finase® and Quantum™ brands, is continually working to expand its global registration coverage for these products. The company has also recently launched Finase® EC, its second generation 6-phytase from *E.coli*, in Europe.

AB Vista, which had anticipated increased market demand for phytase and for its own products, believes that its brands can help replace most if not all added inorganic feed phosphates in some diets.

Dr. Graham commented: “AB Vista is unique in offering a wide range of phytases with different efficacy and thermostability characteristics. From this excellent platform, research is ongoing to develop even more efficacious and intrinsically thermostable phytases as well as products capable of degrading more than 75% of the phytate in the diet”.

“AB Vista intends to remain at the vanguard of this phytase development and, at the same time, to accompany our customers towards maximising their profitability”, also stated Dr. Graham.

In reaction to claims by an inorganic feed phosphate producer that phytase is faced with technical limits concerning heat resistance and cannot cover the totality of the animal's phosphorous requirements, Dr. Graham argued that phytase suppliers remain committed to

developing more thermostable products that can be used in a wide range of feed processing conditions. In addition, he pointed to the fact that many feed producers, particularly in Europe, use liquid enzymes, applied post-processing, thus avoiding any thermostability problems.

Dr. Graham also highlighted that the ability of phytases to release additional phosphorus to the animal is limited by the level of phytate present in the diet. Although phytases can help replace most if not all added inorganic phosphates for some animals, they will only replace some of the inorganic phosphates for others, such as young animals with a high phosphorus requirement.

“Phytase use is limited by the level of phytate in the diet. Thus, in average diets, a standard dose of 500 U phytase activity per ton of feed will replace 5-10 kg dicalcium phosphate (DCP) per ton of feed, depending on the diet composition and the phytase used. Thus, DCP would still be required in many diets, particularly for young animals, to fulfil requirements. Higher phytase doses or the use of more effective phytases would increase the amount of DCP that could be replaced”, said Dr. Graham.

AB Vista’s Technical Director does believe, however, that the high value of phytase to the feed producer will continue to prevail in the customer’s choice.

According to Dr. Graham, the demand for inorganic feed phosphates, or even for meat-and-bone meal and distillers grains which would bring additional sources of available phosphates to Europe, should not significantly affect the phytase market.

The phytase industry raised production levels and kept pricing attractive to customers, especially during the feed phosphate shortage in 2008. And now, the inorganic feed phosphate overcapacity situation in Europe and North America, with its resulting lower prices, is unlikely to have any significant influence on phytase use, stresses Dr. Graham.

“The high prices and poor availability of inorganic phosphates during late 2007 and early 2008 increased the rate of phytase market penetration and also to some extent inclusion rate. However, the current overcapacity in the phosphates market, and the resulting lower prices, is unlikely to have any significant influence on phytase use by current customers due to the additional benefits and profitability that phytases can deliver in terms of energy, minerals, protein and amino acids”, commented Dr. Graham.

“Phytase market penetration continues to grow, but the rate of growth will to some extent depend on the price of DCP, with low prices leading to slow growth and high prices to more rapid growth”, added Dr. Graham.

He went on to say: “The total value to the end-user of phytase is up to EUR 9 per ton, with only 30% coming from phosphate replacement. The remaining 70%, or over EUR 6, comes from spared energy, minerals and protein and amino acids. Thus lower phosphate prices actually have little effect on value to the end user”.

Finally, Dr. Graham pointed out some other advantages of an increased use of phytases in animal diets:

“It is remarkable that using phytases across all swine and poultry feeds could save the industry close to EUR 5 billion per annum. It is also interesting that phytase use could reduce global manure phosphorus excretion from these animal species from something like 1.9 million tons per annum to 1.1 million tons per annum, a reduction of around 40%”.

This interview appeared on Feedinfo on Monday 19<sup>th</sup> April 2010.

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