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FeedChannel.online is a new online channel that recently broadcast a webinar on a new way to consider enzyme solutions: the Feedase approach.

For its third webinar, FeedChannel.online focused on global feed digestibility. Improving feed digestibility still remains a key challenge for profitability and sustainability in the animal production industry. Enzymes have long been thought to improve feed digestibility, and thus feed value. But how should enzymes be used for optimum benefits? The webinar was an opportunity for Dr. Pierre-André Geraert and the invited speakers to offer new perspectives on how enzymes can be used.

On February 24th, Dr. Geraert welcomed Prof. Knud Erik Bach Knudsen (Aarhus University), Prof. Michael Kidd (University of Arkansas) and Dr. Jean Noblet (INRA France) for a webinar entitled ***Feedase: The Global Feed Digestibility Approach***. The three experts notably provided insight into fiber (Prof. Knudsen), amino acids and energy relationships (Prof. Kidd), and net energy and fiber (Dr. Noblet).

The webinar began with an interesting discussion on the indigestible fraction. Dr. Knud Erik Bach Knudsen explained that the most important indigestible fraction of feed is derived from fiber, which is made up of non-starch polysaccharides (NSP). Animals lack the adequate enzymes to break down NSPs, which means that they cannot be digested. Insoluble fiber can stay intact as it passes through the upper part of the intestinal tract, thereby locking in the nutrients (proteins, fat, phosphorus, etc...) present within the cell walls. As a result, animals are unable to use such nutrients. Furthermore, Prof. Kidd spoke about phytic acid and NSPs as being powerful chelation molecules. Phytate easily creates chelates with cations or amino acids. For instance, the binary interaction consists of a basic amino complex with lysine, arginine or histidine. These complexes considerably decrease amino acid digestibility and lead to problems in feed reformulation, since a decrease in lysine utilization through those bindings also impairs amino acid balance.

The second part of the webinar was dedicated to feed digestibility. Dr. Jean Noblet presented several trial results showing that energy digestibility is negatively affected by dietary fiber content. Moreover, it has also been noted that adult pigs are able to digest more energy than growing pigs given the same feed, which suggests that there is still a margin for improvement between the two physiological phases. Furthermore, enzymes could make it possible to attain the energy digestibility level observed in older animals. Prof. Kidd also gave further insight into amino acid digestibility, which should be assessed for good feed formulation in addition to future prospects for low protein diets and optimized amino acid content.

These issues indicate that solutions to increase feed digestibility, and more specifically, the role of enzymes, should be reconsidered. All three speakers mentioned the need for enzyme solutions that are able to attack the indigestible fraction of feed as a whole. Still, how would it be possible to go from individual enzyme effect to a global impact on overall digestibility? Synergistic enzyme destruction should be considered to address this issue in particular. In fact, two different trial examples have already suggested that a global enzyme solution, when added to the diet, increases nutrient digestibility—and for all nutrients, including fat, proteins, starch, etc. This shows that the enzyme solution would be effective not only on substrates, but on the whole indigestible fraction. Various nutrients contained in the feed which were not initially available to the animal could therefore be released. This is known as the Feedase effect.

The webinar continued with a roundtable discussion and the speakers had an opportunity to answer a number of questions posted on the web. The web attendees were particularly interested in getting more information on the importance of anti-nutritional factors in various types of diets. Watch or re-

watch the webinar on www.feedchannel.online. If you have questions, there is still time to send them to feedchannel@feedchannel.online. Be sure to visit FeedChannel for special interviews & content after the ESPN in Barcelona in May 2017, with Advancia Academy.