

## **INTERVIEW: Adisseo Aims to Reduce the Indigestible Part of the Diet with New Feed Enzyme**

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**4 August 2016 - In June, Adisseo introduced the latest innovation from its feed enzyme Rovabio® range: Rovabio® Advance – an efficient combination of enzymes which can improve the digestibility of all feed nutrients, including amino acids, phosphorus and calcium, no matter what type of diet used. And due to this reliable overall feed digestibility improvement, which lead to a reduction of costs and a reduction of nutrient losses, Rovabio® Advance is technically described by Adisseo as a Feedase. And according to the company it is the only one available in the market today with such potential.**

Rovabio® Advance is the result of a 10-year research program in bioengineering and animal nutrition. It is now authorized in most parts of the world and is available in different forms (powder and granulated at 50 g/MT of feed or liquid at 100 or 200 mL/MT) to fit various feed mill applications.

Feedinfo News Service turned to H el ene Lionet-Llorca, Enzymes Business Unit Director at Adisseo to obtain some insight into why her company believes it has revolutionized feed digestibility thanks to Rovabio® Advance.

**[Feedinfo News Service] Ms. Lionet-Llorca, what is a Feedase and why is Adisseo currently the only company able to provide a product that can improve the digestibility of all feed nutrients, including amino acids, whatever the type of diet?**

**[H el ene Lionet-Llorca]** Natural feed digestibility is normally not higher than 80%, which means at least 20% is indigestible. Improving the digestibility of this fraction is key to significantly decreasing production costs and improving the sustainable development of monogastric meat production. Literature shows that feed enzymes would allow recovery of approximately 35% of this indigestible fraction, leading to an improvement of up to 7% of the total feed digestibility. Adisseo’s new generation Feedase focuses on reducing the indigestible fraction and, thus, improving consistently the overall feed digestibility and efficiency. Rovabio® Advance, the only Feedase, provides improvement in the order of 3% in the overall digestibility of organic matter, supported by a higher digestive retention of starch, protein, and fat. Thanks to the degradation of the fibrous structures in the cell wall of vegetable raw material, nutrients’ accessibility to the normal digestive processes is improved.

Adisseo invested more than 10 years to develop a revolutionary enzyme solution able to improve the overall digestibility of feed, including amino acids, energy and phosphorus, from any kind of cereal. Because Rovabio® Advance is enriched with key enzyme activities, such as xylanases and arabinofuranosidases, the product has equal efficiency in releasing nutrients by degrading the substrate inside any kind of cereal used in animal nutrition. A number of in vivo trials have proven that Rovabio® Advance is capable of improving the digestibility of those nutrients and further positively affecting the performance of animals.



**Hel ene Lionet-Llorca**  
Enzymes BU Director  
Adisseo

**[Feedinfo News Service] Can you provide a brief historical overview of Rovabio® Advance from its conception 10 years ago to its launch today?**

**[Hélène Lionet-Llorca]** Everything started when we decided to focus on the main anti-nutritional factor present in cereals that reduces a feed's overall digestibility: arabinoxylan chains. These chains present complex and highly variable structures and they require a number of enzymes to fully and reliably break them down. In particular, we identified that the synergic effect of endo-xylanases and arabinofuranosidases is required.

Taking this into account, our biotechnology research team worked intensively on Adisseo's strain of *Talaromyces versatilis* to enhance its production of these two enzyme activities, in diversity and concentration. Finally, both *in vitro* and *in vivo* trials were carried out to evaluate the product's efficacy. The obtained results proved that Rovabio® Advance is capable of consistently increasing the digestibility of energy, amino acids and phosphorus, leading to an improved animal performance.

Rovabio® Advance is currently produced in Europe inside highly reliable facilities and under a rigorous quality-control system. We have faith in the success of Rovabio® Advance in the global and ensured in advance that our facilities would have enough capacity to be able to increase our supply to meet any rise in demand. Finally, Rovabio® Advance is now registered in the EU, as well as in several countries in South, Central and North America, Africa and Asia. In most of these countries, which represent more than 50% of the market potential, we have officially launched the product.

**[Feedinfo News Service] What early feedback are you getting from customers using Rovabio® Advance?**

**[Hélène Lionet-Llorca]** Numerous customers all around the world in different feed and animal-rearing conditions have evaluated Rovabio® Advance. Consistently, these customers report a superiority in the performance of Rovabio® Advance versus the former generation NSP-enzymes. Our global and regional teams have been assisting nutritionists in the extraction of the maximum value from this Feedase, especially through the modeling software Rovabio® Advance Predictor. This tool provides a tailor-made nutritional matrix for Rovabio® Advance based on the potential estimated for the feeds produced by customers in their own conditions.

**[Feedinfo News Service] In a feed mill producing 100,000 MT of poultry feed per year, Rovabio® Advance has been seen to generate an extra margin of at least EUR 300,000 per year compared to former generations of NSP enzymes. Can you explain how this is possible?**

**[Hélène Lionet-Llorca]** First, we need to consider that the savings after reformulation with any enzyme solution depends on the current price of the target raw materials. The role of Rovabio® Advance allows a reduction in the feed specifications in terms of not only energy, but also digestible amino acids, calcium and phosphorus. By considering the potential for these nutrients together in the formulation, the savings rises significantly, achieving more than EUR 3 per MT. Therefore, a feed mill producing 100,000 MT per year would reach a difference of EUR 300,000 in overall savings with the use of our Feedase, compared to the former generation of NSP-enzymes.

**[Feedinfo News Service] Can Rovabio® Advance be considered an "all-in-one" superior product? What will become of the other products in the Rovabio® product range?**

**[Hélène Lionet-Llorca]** We do consider Rovabio® Advance to be the best enzyme solution available in the global market. Therefore, we expect Rovabio® Excel users to fully adopt the new generation Feedase. Of course, this switching process takes some time since it depends on registration and customer evaluation processes. In the meantime, we will maintain the production of Rovabio® Excel, and it will remain available to the market.