FEEDINFO PERSPECTIVES

ADISSEO A Bluestar Company

Adisseo Launches New Handbook on Successful Use of Liquid Additives in Feed Manufacturing Processes – INDUSTRY PERSPECTIVES

NOV 2023

The use of liquid feed additives is becoming increasingly popular, but it is a technical topic which is sometimes not well understood, or can be neglected entirely by operators. Adisseo, which has spent decades working on the application of liquid additives in compound feed plants, has launched a new handbook on the subject which gives clear guidance and is freely available to all.

Speaking to Feedinfo in today's Industry Perspectives, Pascal Thiery, Head of Applied Nutrition and Feed Technology at Adisseo France, explains why the business has published the handbook. He says liquid additives have numerous advantages - the first one being economic. However, application has to be professionally approached and carried out to achieve optimum feed quality and animal performance.

His colleague, Marc Perel, Global Solution Application Manager for Adisseo France, discusses some of the key areas which must be studied before considering a move to liquid application, as well as how to ensure the operation is successful.

With feed producers seeking more products in liquid form, Adisseo says it has expanded its extensive knowledge of liquid OH-Methionine use in feed mills to other products, including enzymes, methionine sources for ruminants, palatants and emulsifiers, and has incorporated this knowledge into its new handbook.

[Feedinfo] The handbook is an in-depth reference source for the feed industry. Can you tell us why you have launched the handbook? Is this something you are finding is of increasing interest to customers?

Pascal Thiery
Head of Applied Nutrition and Feed Technology
Adisseo France

[Pascal Thiery] Beside our wide product portfolio, Adisseo also offers its customers a wide range of services through the feed manufacturing process. This goes along the entire value chain, from crop to processed feed and is targeting the nutritional value of ingredients, from mycotoxin management to digestible amino acids, as well as technical services for additive application.

With our long experience in the application of liquid additives in compound feed plants, we wanted to share some of our knowledge with all market players worldwide. The handbook is aimed at feed manufacturers, as well as equipment manufacturers, test centres, students and others in the sector who have an interest in this technical subject.

The use of liquids, whether as raw materials or additives, is very common and has increased in recent decades. Nevertheless, it is a subject that is sometimes poorly understood or even neglected by operators.

Liquid additives have numerous advantages - the first one being economic. The use of liquid additives, like any other product, has to be professionally approached and carried out in order to achieve feed quality, and, at the end, optimum animal performance.

The handbook contains a wealth of information and best practices for use of liquid additives to make sure animals will receive the right amount of active ingredient in their feed. We believe this original document will become a true reference in the industry.

[Feedinfo] The handbook covers a wide range of technical advice about using and applying liquid additives and supplements in feed mills. What liquids are used, and what advantages do they have compared with powders? How widely used are liquids in formulations at present, and how great is the opportunity to use them more?

[Pascal Thiery] While water and oil, the major liquids, are often added into the mixer, liquid additives are used in very small amounts.

Liquid additives cover many categories; amino acids and their analogues (methionine, lysine), enzymes, palatants, preservatives (acidifiers, antioxidants), etc. Their addition to the ration formulation does not interfere with the mixer's efficiency; indeed, sometimes they can give an advantage!

Liquid additives have different characteristics. In addition to greater formulation flexibility, they are often an interesting alternative to powder forms, allowing automation with no need to handle bags, no dust emissions (a health and safety issue), better management of packaging waste and so on.

As Adisseo, we are seeing an increasing demand for many ranges of products in their liquid form, such as palatants, methionine sources, enzymes and others.

[Feedinfo] What are the key things to consider when planning to use liquids in a feed mill or plant for the first time? Are there specific points which need to be thought about and addressed in order to make the use of liquids straightforward, accurate and low maintenance?

[Marc Perel] As it is often the case, the most important thing is to clearly identify and describe your needs: what additives, what incorporation range, what forecast consumption (which will have a direct impact on storage and the investment envelope), and which addition point(s)?

Marc Perel
Global Solution Application Manager
Adisseo France

The expected level of application accuracy should also be predetermined. Local environmental and regulatory conditions must also be taken into account. Safety, for both operators and installations, will be a major criterion at every stage.

[Feedinfo] The handbook makes some recommendations of equipment and suppliers. What should feed manufacturers look for when considering buying liquid application equipment for their plant(s)? And with any plant breakdown costing time and money, how can they ensure ease of maintenance?

[Marc Perel] Once you have defined your needs, it is important to turn to a trusted supplier with a thorough knowledge of animal feed and liquids.

They should propose good quality equipment, which means quality parts, correct assembly, and a consideration of the interface with the existing process. They must also commit to obtaining expected results on product application and feed quality. The handbook gives more details on this subject, as well as on good equipment design.

Depending on plant profiles and customer preferences, maintenance responsibility should be established at the start of the project and carried out by qualified individual.

[Feedinfo] In common with all feed manufacturing, accuracy and consistency of dose rate is essential. When using liquids, what are the key areas which need to be considered during application, mixing and processing in order to achieve a quality, consistent end product? And are there other considerations which need to be given when liquids are applied post-pelleting?

[Marc Perel] Whatever the plant and the point of application, the common objectives are conformity and homogeneity. The same applies, of course, to powder. The handbook details how to achieve these objectives through the design, use and maintenance of equipment.

Regarding application principle, a distinction can be made between batch addition, typically in the main mixer, and post-pelleting liquid application (PPLA). In most cases, PPLA is carried out continuously. The crucial point is therefore to adjust the liquid flow rate to the solid flow rate (the feed), which is a little trickier.

[Feedinfo] Adisseo has years of experience and knowledge on the addition of liquid additives and supplements in feed mills. Are they more popular in some geographic regions or types of feed manufacturer than others, and, if so, can you tell us why?

[Pascal Thiery] Historically and volume-wise, we have developed our extensive knowledge about liquid OH-Methionine usage in feed mills. We have expanded this know-how to other products, including enzymes and methionine sources for ruminants.

More recently, products such as palatants and emulsifiers, among others, are expanding our approach to feed millers and we also deepen our expertise on their value, use and application.

When we look at the usage of liquid OH-Methionine, for example, we can say that it is worldwide. We find that it is the size of the feed mill which makes customers change from a powder form of feed additive to a liquid form. Considering the potential savings in feed production (handling and formulation), the impact can be very important for big units.

Smaller feed manufacturing units need solutions adapted to their liquid additive usage, and Adisseo offers many adapted solutions for their specific cases.

In terms of ongoing product development, we also take into consideration the flexibility of feed presentations required to match the needs of various customer profiles.

The handbook is available on the Adisseo website: https://www.adisseo.com/en/handbook-for-the-application-of-liquid-additives-to-feed/

Published in association with Adisseo