



Processed Animal Proteins

A relaxation of European feed ban in Europe looks set to open new markets

by EFPRA, Belgium

Processed Animal Proteins (PAPs) are now available for use in pig and poultry feed after many years as an important ingredient for pet food and aquafeed. PAPs are produced from animal by-products from healthy animals that are fit for human consumption. In every animal reared for food, a significant quantity of material is inedible or not eaten for cultural reasons. These by-products contain a range of valuable fat, protein and minerals, the rendering industry recovers these materials and makes them into raw materials for use in feed and other applications.

Recovering material and putting it to a high value use such as animal feed represents a useful step towards a more sustainable food system. The composition of PAPs also offers potential animal welfare benefits by providing a nutrient rich diet to pigs and poultry thereby improving health and welfare.

Opening up new markets

In Europe, using Processed Animal Proteins (PAPs) in aquaculture was restricted until 2013. Since then, non-ruminant PAPs have been permitted reflecting scientific consensus on the safety of feeding land animal proteins to fish. Rendered animal fat and oil have been available to use in aquafeed for many years without any restrictions.

PAPs are free from any specified risk material and the highest standards of hygiene and traceability mean it is a safe, healthy animal feed. Prior to this announcement, the use of PAPs in the diets of farmed land animals was much more restricted in the EU, with the recent relaxation welcomed by many stakeholders across the continent.

The European Fat Processors and Renderers Association (EFPRA) welcomes the recent relaxation of the so-called feed ban that relates to the reuse of animal proteins, with the move widely considered to be a signal of commitment to building a more sustainable circular economy in Europe.



Annex IV of Regulation (EC) No 999/2001 has now been amended to allow Processed Animal Proteins (PAPs) to be used in the diets of non-ruminant animals. Specifically, protein derived from pigs may be used in poultry diets while, protein derived from poultry is allowed in pig diets.

“Our members are understandably pleased with the changes in the regulations which opens up new markets for their products,” says EFPRA General Secretary Dirk Dobbelaere.

“It is testament to the hard work member companies have done to ensure the industry operates at a very high technical and scientific level. It means we can produce safe, healthy single species animal proteins that are highly valued as feed ingredients.

“Today is really the first stage in the process, the next step is for EFPRA members to work closely with other parts of the food supply chain to find beneficial ways to increase use of animal by-products in animal feed.”

A Europe-wide move towards more sustainable practices

The decision marks a Europe-wide move to more sustainable circular business

practices. This includes initiatives such as the Green Deal, Farm-to-Fork Strategy and UN Sustainable Development Goals. Rendering, with its history of reprocessing by-products back into useful raw materials is a longstanding example of the circular economy in action.

“The member companies of EFPRA facilitate the operation of the whole animal-based food chain,” says EFPRA Technical Director, Dr Martin Alm. “Safety is always our first priority; we take the by-products from animal production and make them safe. This protects the health of humans and animals by preventing disease.

“And we do more, we take these by-products and transform them into a diverse range of raw materials and ingredients which are used in food production and other areas of the economy.”

Dr Alm acknowledges that livestock production can be a hotly debated issue in discussions around sustainability, but he is keen to stress EFPRA’s role in lowering the environmental impact of the whole animal-based food chain.

“By mass, approximately half of every animal produced for meat doesn’t become food. Renderers make sure that everything is used, and nothing is wasted. The materials such as PAPs and fertiliser that

are recycled back into food production have a low carbon footprint compared to virgin raw materials.”

A lower carbon footprint

EFPPRA uses the GFLI accreditation system to assess the sustainability credentials of animal fats and proteins as animal feed. According to this analysis, PAPs have a lower carbon footprint than soy, particularly when land use change is taken into account.

It is also thought that there are health benefits to pigs and poultry consuming a diet containing PAPs. Research projects are already underway at Wageningen University in the Netherlands to investigate this. “Restrictions on animal protein use were introduced 20 years ago.

Since then, agricultural practices as well as technology and methodology in the rendering industry has changed but the standard values for animal proteins in feed tables has not,” says Carine van Vuure, member of the EFPPRA Technical Committee.

“Research is aiming to fill this critical gap in our knowledge as well as measure if there are any animal health and performance benefits to using PAPs.”

At present, there are some early indications of these benefits, but the size and scope of the studies means that there is no conclusive evidence until more research is complete.

Summaries of the research to date into pig and poultry diets containing PAPs, including feed tables for linear programming for compounders are available at the EFPPRA website.

EFPPRA anticipates that inclusion rates of 2–10 percent will become commonplace to



Sjors Beerendonk



Dr Alm



Dirk Dobbelaere



Caine Van Vuure

supply protein and other essential nutrients in the feed ration. “PAPs are one of nearly 2000 ingredients so we need to work in partnership with pig and poultry producers, and feed compounders to understand the optimum usage.”

Compounders and farmers are the immediate customer for PAPs, but EFPPRA is also thinking about attitudes further along the value chain. “Retailers and consumers need to know that PAPs are a safe, healthy and sustainable feed ingredient,” says EFPPRA President Sjors Beerendonk.

“Pigs and poultry are omnivorous so would naturally seek out protein rich food, that is why PAPs are such a valuable feed ingredient. Likewise carnivorous fish such as salmon as well as domestic cats and dogs can all benefit from diets that include PAPs.

“Europe has the world’s most effective animal by-product regulation to ensure the safety and quality of the finished product. To make PAPs for pig or poultry feed, every stage of the process is strictly segregated by species, right down to the lorry which delivers compound feed to the farm.”

Understanding more about PAPs

To help the public understand more about PAPs and the rendering industry in general, EFPPRA has prepared a wide range of information available on its website. It includes answers to some of the most common questions they are asked about the topic.

Following Brexit the changes in regulation do not apply to the UK, which still prohibits animal proteins in pig and poultry diets. FABRA, the UK rendering industry trade body and EFPPRA member, has published a position statement about whether a similar change in legislation will happen in the UK.