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QUESTIONS & ANSWERS ON THE PARTIAL LIFTING OF THE FEED BAN ADOPTED ON 17 AUGUST 2021

(REGULATION (EU) 2021/1372)

On the product

What does Regulation (EU) 2021/1372 provides for?

Regulation (EU) 2021/1372 adopted on 17 August 2021 and published on 18 August 2021 re-authorises the use of

- processed animal proteins (PAP) derived from pigs and insects in poultry feed;
- processed animal proteins derived from poultry and insect in pig feed;
- gelatine and collagen of ruminant origin in the feed of non-ruminant farmed animals.

Strict conditions are built in the Regulation to prevent cross-contamination, ensure compliance with the prohibition of intra-species recycling (i.e. cannibalism), and facilitate official control of the feed.

What are Processed Animal Proteins?

In the European context, Processed Animal Proteins (PAP) are legally defined as a product manufactured from category 3 animal by-products, i.e. the part of animals (bones, offals, etc.) coming from non-ruminant animals controlled as fit for human consumption at the point of slaughter. The manufacturing of processed animal proteins is subject to strict processing requirements to secure their safety for use to feed animals and is performed only by approved establishments (Regulation 1069/2009 on Animal By-Products and its Implementing Regulation 142/2011).

What kind of PAP is permitted for use in feed for food-producing animals?

PAP of fish origin, better known as fish meal, may be used in all species except ruminant feed. PAP from pig and poultry were re-authorised in 2013 and insect PAP in 2017 for use in fish feed only. The recently adopted regulation provides for a re-authorisation of porcine PAP in poultry feed, avian PAP in pig feed and insect PAP in both pig and poultry feed.

Why are PAP suitable for use in animal feed?

PAP are a source of highly digestible proteins, energy, and also in minerals (e.g. calcium, phosphorus), and vitamins of the B group, especially vitamin B12, which is not present in feed materials of vegetable origin. Before being delivered to animals, PAP are mixed with other feed ingredients making a compound feed. PAP may be used at inclusion rates up to 5-7% in practice.

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Are there other uses of PAP and why would their use as feed be more sustainable?

The main usage of PAP is in the petfood sector and as fertilizer as far as ruminant PAP are concerned. The rest is exported outside the EU. In accordance with the principle of circular economy, a key policy objective to improve the sustainability of the food chain is to maintain as many resources as possible within the food chain as long as the resources are safe and fit for purpose, thereby contributing to minimise waste and optimise the contribution to food security. Extending the scope of use of avian and porcine PAP as feed for feeding resp. pig and poultry is therefore perfectly consistent with the circular bioeconomy concept.

On the safety of PAP

Are PAP safe for use and what guarantees do we have that the reuse of pig and poultry PAP will not result in a new BSE crisis?

Yes, PAP are safe because they are produced according to the strictest safety rules and only from healthy animals fit for human consumption.

The re-authorisation of avian and porcine PAP for use resp. in pig and poultry feed was decided on the basis of an assessment[1] by the European Food Safety Authority of the risk of transmission of BSE. Even in case of contamination of avian or porcine PAP by ruminant material, the risk of transmission of BSE is negligible because of the measures taken to withdraw risky materials of ruminant origin at the earliest stage and because transmission of BSE has been shown only under experimental conditions for pigs and never in poultry.

The current European regulation lays down certain rules to avoid the BSE risk. The first is the "non-cannibalism" principle, which states that feeding an animal processed animal protein from its species is banned. Furthermore, since ruminants are known to be potential carriers of TSEs such as BSE in cattle or scrapie in sheep and goats, PAP derived from ruminants are banned from the feed of all farmed animals.

Then only Animal By-Product classified as category 3 material (fit for human consumption) at the point of slaughter under supervision of veterinarians and produced only in slaughterhouses that do not slaughter ruminants may be used for PAP production. The identity is preserved all along the chain to avoid mixing with ABP from other categories or material from ruminants.

Lastly, the manufacturing and use of porcine and avian PAP is subject to strict requirements in terms of species, ie. specific dedication of facilities and transport means all along the chain to avoid the presence of avian PAP in poultry feed and porcine PAP in pig feed and the presence of any of these in ruminant feed and feed or other species where these PAP are not permitted.

What is the difference with MBM?

In the European context, Meat and bone meal (MBM) is legally defined as a product manufactured from category 1 and 2 animal by-products, i.e. materials which are not fit for human consumption (e.g. fallen or euthanised animals as well as carcasses of animals deemed not fit for human consumption). Since the outbreak of the BSE crisis, MBM cannot be used as feed material, but it is valued as a source of green energy and raw material in a variety of industrial applications.

20 years ago, a link was established between the BSE crisis and MBM, which lead to their prohibition in feed. At that time, it was also decided to extend this ban to the use of PAP and some other products of animal origin.

[1] Updated quantitative risk assessment (QRA) of the BSE risk posed by processed animal proteins (PAP) https://efsa.onlinelibrary.wiley.com/doi/full/10.2903/j.efsa.2018.5314

The distinction between PAP and MBM is specific to the EU. At the global level, usually only the term MBM is used to qualify animal proteins whatever the category of animal by-products used and whatever the destination (feed or other destinations), which leads to confusion, especially since the term “PAP” is rarely used by media outlet in Europe.

While PAP and MBM are both derived through the rendering process, the legal framework requires that PAP are produced in dedicated processing facilities, separate from those producing MBM.

Why were PAP banned in 2001 if they are safe and what has changed since 2001 that permits their re-authorisation as feed?

In 2001, it was decided, as a precautionary measure and in addition to the ban on MBM, to permanently ban the use of ruminant PAP in any animal feed and the use of any PAP in ruminant feed. In addition, since the legal framework was not appropriate to guarantee a strict separation between PAP and MBM all along the chain to minimize the risk of cross-contamination between non-ruminant PAP and ruminant PAP or MBM, it was also decided to ban the use of non-ruminant PAP in non-ruminant feed. Only the use of fish PAP in fish feed was permitted. The implementation of stricter processing, transport and traceability requirements for PAP (Regulation 1069/2009 on Animal By-products and regulation 999/2001 on TSE), the fact that the last case of classical BSE in the EU dates back to 2016, the development of extremely sensitive methods of analysis and the strict segregation and traceability rules imposed by the legislator for the use of non-ruminant PAP in non-ruminant feed made their re-authorisation possible.

What about the safety of insect PAP?

Insect proteins are authorised as Novel food. Insect PAP are produced from the same type of insect species. Insects are part of the normal diets of pigs and poultry. Insect PAP were authorised in 2017 for use in fish feed based on a risk profile established by EFSA which concludes that insects pose little risk of TSE transmission. As any material of animal origin, insects may carry pathogenic micro-organisms. This is why insect PAP are subject to the same treatment requirements as other PAP to eliminate these pathogens, meaning they are as safe as avian and porcine PAP. In addition, the rearing of insects is subject to the same feeding requirements as farmed animals, i.e. insects meant for feed use may not be fed with catering waste or manure. Similarly, they must be completely cleared of the substrate on which they were reared before processing into PAP can begin.

Are there products of ruminant origin authorised for use in feed for food-producing animals?

Yes: cow milk may be fed to any animal as it was demonstrated that milk was not a vector of transmission of BSE. Likewise, ruminant fat (tallow) is also authorised for use in feed for food-producing animals. In both cases (milk and ruminant fats), minimum treatment requirements are laid down in the ABP legislation. In addition, the new regulation authorises the use of gelatine and collagen from ruminants in non-ruminant feed. This is meant to enable the use of a surplus of food products containing gelatine, such as confectionery products, which otherwise would have to be disposed of as waste. This authorization of ruminant gelatine in non-ruminant feed is based on an EFSA assessment[2].

[2] EFSA assessment of the potential BSE risk posed by the use of ruminant collagen and gelatine in feed for non-ruminant farmed animals https://efsa.onlinelibrary.wiley.com/doi/full/10.2903/j.efsa.2020.6267

On the potential use of PAP

How much PAP is likely to be reused and to which extent does it contribute to reduce EU dependency in proteins?

Using PAP can reduce the EU's dependence on imports and, at the same time, improve the sustainability of the food and livestock chain. However, there should be no false expectations as to the ability of processed animal proteins to replace the majority imports of soybean meal from Third Countries:

- Production wise, it is estimated that 1.3 mio. t of porcine and avian PAP or a mixture of those are produced in the EU, thereof 0.8 mio.t are used for petfood or fish feed and 0.5 mio.t are exported. Considering that the economic interest of avian and porcine PAP is higher in the petfood and fish feed sectors and no separation between both is required, it is expected that the maximum quantity of avian and porcine PAP that may be used in resp. pig and poultry feed is around 0.5 mio.t.
- In addition, only feed mills with dedicated facilities for pig feed or poultry feed are allowed to use either avian or porcine PAP. It is estimated that less than 10% of the EU feed mills will be allowed to use either avian or porcine PAP.
- Finally, the decision from companies to decide to reuse avian or porcine PAP will depend on many factors in particular the competitiveness of the PAP vs. other sources of proteins, the acceptance by chain partners and consumers, the costs of compliance with requirements, in particular the monitoring costs, etc.

What is the potential for use of insect PAP?

Insect PAP are an interesting source of highly concentrated and highly digestible proteins, suitable for feeding young animals and fishes. They have been authorised for use in fish feed since 2017. As this is an emerging activity, the use of insect PAP is limited nowadays to a few thousand tonnes but it is expected that the usage will develop when production costs will decrease, making insect PAP competitive vs. other highly concentrated protein sources like dairy proteins, potato or soy concentrate as well as microbial biomass and other similar products.

What does the re-authorisation of ruminant gelatine mean in practice?

It is estimated that 100,000 t of former foodstuffs (i.e. food products not consumed by humans due to packaging defect, misshaping, passed used-by-date) are disposed of as waste by food manufacturers due to the prohibition on using ruminant gelatine in feed for food-producing animals. In addition to ruminant gelatine containing former foodstuffs, there is also a large share of former foodstuffs not containing any ruminant gelatine that becomes available that food manufacturers are currently unable to sell as feed due to segregation complexities when they operate production lines with ruminant gelatine containing foodstuffs. Thanks to the re-authorisation of ruminant gelatine, these 100,000 t will be available for use in non-ruminant feed.

What will be the economic benefit for operators of using pig and poultry PAP?

PAP may provide a slightly cheaper alternative to high protein-rich feed materials. However, the quantities available are limited and the selling price will be aligned with other similar feed materials. In addition, complying with legal requirements, in particular on monitoring, will have a cost, which will further limit the potential economic gain for operators using porcine and avian PAP.

On the legal requirements for operators

What does the legislation require to avoid cross contamination with products of ruminant origin?

The legislation requires a strict dedication of production facilities all along the chain to prevent any risk of cross-contamination during the manufacturing, storage and transport. These rules make it impossible

- for any ruminant PAP to “contaminate” porcine and avian PAP;
- for any porcine PAP to “contaminate” avian PAP and vice-versa;
- for any ruminant PAP to be used in feed mills producing feed for pig, poultry and other food-producing animals;
- for any insect, porcine and avian PAP to “contaminate” feed for species other than fish, pig and poultry;
- for any porcine PAP to “contaminate” pig feed;
- for any avian PAP to “contaminate” poultry feed.

How will operators avoid cross-contamination? Can we trust operators?

Operators producing or using PAP are required to comply with the requirements in terms of physical separation of production facilities to the presence of non-authorised PAP. The license to operate may be granted only where the competent authority is satisfied, following an on-site inspection, of the compliance with legal requirements and the effectiveness of measures aimed to prevent cross-contamination.

In addition to the physical separation of production facilities, operators at each stage of the chain are required to implement a monitoring programme to check for the absence of non-permitted PAP based on species specific PCR methods validated by the European Union Reference Laboratory for Animal Proteins in feeding stuffs (EURL-AP) to detect the presence of ruminant, porcine or poultry DNA in feed. Any non-compliance shall be immediately notified to authorities and all results of auto-controls must be available to authorities during official controls. Generally speaking, in the feed sector, 2/3 of the notifications to the EU Rapid Alert System for Food and Feed (RASFF) concern contaminations detected during auto-controls.

Feed Safety Assurance Schemes have been developed in the feed chain, subject to certification by third parties. Participation of operators in such assurance schemes provides a high level of trust among operators and between operators and authorities.

The animal feed industry and control authorities have already acquired experience in this area since 2013 with the re-authorization of the use of processed pig and poultry proteins in fish feed, under conditions identical to those decided today by the European legislator for the re-authorization of pig protein in poultry feed and vice versa.

On official controls

Are official controls sufficient to ensure a correct application of the legislation?

The EU legislation on official controls requires that each Member State implements a risk-based control programme and dedicate sufficient resources to this end. They have possibilities to charge fees to operators to compensate for the control costs.

The official controls take the form of physical inspection of establishments, verification of the HACCP-based feed safety management system and its implementation by the operator, verification of records and results of auto-controls. The intensity of controls depends on track-records of compliance of the operator with legal requirements.

Are the methods of analysis fit for control of compliance (qualitative vs. quantitative, sensitivity, suitability of the target for analysis)?

The methods of analysis used (microscopy and/or DNA PCR) are extremely sensitive and with extremely low detection levels (a few fragments of DNA of ruminant/pig/poultry are easily detectable in a sample of feed). Therefore, any non-permitted cross-contamination will be detected. In practice, the target of the analysis being DNA and not PAP and considering that the proportion of DNA in PAP is highly variable, the method of analysis allows for a quantification of the amount of DNA but not of the amount of PAP present. This is why the method of analysis is said to be qualitative.

The downside of this approach is that the analysis will detect DNA irrespective of whether it comes from a prohibited material (i.e. ruminant or porcine PAP in a pig feed) or permitted material (e.g. cow milk, porcine gelatine). Therefore, additional testing may be required to verify the actual origin of the DNA in case of a positive result). Standards Operating Procedures[3] have been developed by the EU Reference Laboratory for Animal Proteins (EURL-AP) to be followed by operators and authorities when performing analytical controls.

Is there a tolerance for the presence of products of ruminant origin?

No. The method of control being qualitative, any detection of DNA from non-permitted material will be regarded as a non-compliance.

[3] Standards Operating Procedures for the control of compliance with the feed ban – EURL-AP - https://www.eurl.craw.eu/legal-sources-and-sops/method-of-reference-and-sops/

On consumers interest

Will products of animal origin be labelled with an indication of whether the animals have been fed with PAP or not?

Considering that the use of PAP in animal feed does not have any impact on the safety of the product and little impact on the quality of the animal product, the legislation does not require the indication on the label of animal products that the animals got PAP in their diet. It is still possible that, on a voluntary basis and in the framework of quality chains, the specifications foresee that animals may not be fed with PAP and this may be mentioned on the labels of animal products.

What kind of benefit, including economic, can consumers expect from the reuse of PAP?

Considering the costs associated with the production and use of PAP, economic benefits will be limited over the chain and therefore the impact on consumer price will be extremely low. On the other hand, the fact that the use of PAP contributes to circular bio-economy means in the end a lower environmental impact for the production of livestock products.

How to be sure that poultry complies with Halal standards when it might have been fed with porcine PAP?

Halal standards specify what types of ingredients may be used to feed animals and this is not limited to animal proteins. For example, the use of pork fat in poultry feed is legally possible today but is not permitted according to Halal standards. Therefore, Halal certified meat will be guaranteed as coming from animals not fed with porcine material, whether fat or proteins or other.

Is the use of PAP consistent with the aspiration for more sustainable livestock production?

The domestic use as feed in the EU of avian and porcine PAP will allow local use of resources that is nowadays either exported to third countries or used outside the food chain or disposed of as waste.

The Carbon Footprint (CFP) of porcine PAP per unit of protein is estimated 5 times lower than the CFP of soya imported from Third Countries[4].

[4] The CFP of porcine PAP is calculated at 0.66 kg CO_2/kg vs. 2.58 kg CO_2/kg for soybean meal (average value weighted according to the different origins - source GFLI). Expressed per unit of protein, this means a CFP of 1.1 kg CO_2/kg protein from porcine PAP vs. 5.7 kg CO_2/kg protein from soybean meal, i.e. 5 times less.