International Platform of Insects for Food & Feed (IPIFF)

Rue Joseph Stevens, 7, 1000 Brussels, Belgium

IPIFF'S CONTRIBUTION TO THE PUBLIC CONSULTATION OF THE EUROPEAN COMMISSION INITIATIVE ON NUTRIENTS – ACTION PLAN FOR BETTER MANAGEMENT

IPIFF welcomes this initiative on behalf of the European Commission. We believe that the target presented in the European Green Deal for reducing nutrient losses by 50% by 2030 is essential and that an integrated Nutrient Management Action Plan is a unique opportunity to consider the nutrient cycles globally and to provide a holistic and sustainable approach to nutrient management. IPIFF strongly agrees that a higher efficiency of fertilisers through optimised manure management and fertilisation practices is also important to lessen our dependency on the ones we import. IPIFF recalls the important benefits of Insect frass for the soil and how it can contribute to this regard. Moreover, IPIFF is in agreeance that dietary habits have also an impact on nutrient pollution. With Nitrogen losses in the environment being 25 times higher for beef protein, insect farming presents itself as an innovative alternative, being very rich in protein, but also containing several added-value characteristics that contribute to a healthy and rich diet such as vitamins, minerals, and others.

Besides the submitted Questionnaire, IPIFF enjoys this opportunity to submit the complementary contribution paper to highlight how insect farming can support the EU efforts to better manage Nutrients and reduce its losses and consequential impacts on the environment.

ABOUT IPIFF

The International Platform of Insects for Food and Feed (IPIFF) - the European insect sector umbrella association - is a non-profit organisation that represents the interests of actors active across the insect production value chain at the European level. Bringing together more than 80 members - most of which are European insect-producing companies – it aims at contributing to sustainable, circular food and agricultural system by promoting the use of insects and insect-derived products, mainly for food and animal feed.

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HOW CAN INSECT FARMING BETTER CONTRIBUTE TO THE REDUCTION OF NUTRIENT LOSSES' ENVIRONMENTAL IMPACTS?

- ***INSECT FARMING CAN REDUCE THE IMPACT ON THE ENVIRONMENT***

IPIFF recalls that presently, insect farming provides food, feed, and some valuable by-products (e.g., frass) that have a reduced environmental footprint (e.g., reduced land use). Moreover, the circular practices implemented in insect farming help the EU food system to be less and less dependent on finite natural resources. Insect farmers implement sustainable practices in agriculture, without using pesticides, or antibiotics. This 'low-input' approach is in line with the biological characteristics of insects.

- ***INSECT FARMING REDUCES THE ENVIRONMENTAL IMPACT OF NUTRIENT LOSSES***

Insects have the potential to become resource-efficiency champions - upcycling underused materials into sustainable feed ingredients that will reduce the necessity to increase the EU's imports of proteins. As insects are mostly farmed on agri-food co-/by-products or foodstuffs no longer intended for human consumption (i.e., former foodstuffs), such farming practices contribute to safely reintroducing nutrients in the agri-food chains, reducing the food waste burden (e.g., as such products may be downcycled, incinerated or landfilled). Up to 90 million tonnes of food is wasted every year in the EU, half of which is generated at the production and/or processing stage. Up to a third of the food waste generated today could be suitable for insect farming - before it is classified as 'waste'. IPIFF members estimate that up to 20 million tonnes of materials from food-producing industries (such as agri-food by-products or former foodstuffs containing meat and fish) could be upcycled in total, with other several million tonnes being suitable for technical applications.

More incentives to research for further clarification of the European legislator

IPIFF supports the development of calls for projects targeted at developing new innovative food and feed ingredients under the new Horizon Europe Research framework programme. IPIFF recently expressed its support for future-oriented research projects, which would bring added value in addressing challenges related to food waste, soil fertility, as well as human and animal health.

- ***INSECT FARMING CAN BIO-CONVERT WHAT WOULD BE CONSIDERED NUTRIENT LOSSES INTO ANIMAL FEED***

Being highly versatile and efficient, insects can bio-transform many of these materials (before they become 'waste') into a wide range of higher-value products and ingredients - that can further be included in the feed chains:

- For several decades Insect farming provides protein-feed for pets as well as for fur animals, and other non-food producing animals (e.g., reptiles, birds of prey, zoo, and circus animals)[1].
- Since 2017, processed animal proteins derived from farmed insects (PAPs) have been authorised and are a leader in innovative protein feed materials developed for the aquaculture market.[2]
- Also, since late 2021, PAPs are authorised in the European market to supply protein feed ingredients for poultry and swine animals – in line with their natural diets.[3]

Authorising the diversification of former foodstuffs
The authorisation of former foodstuff containing meat and fish would support the reduction of the nutrient losses by upcycling them into valuable outputs (food, feed).

- ***INSECT FARMING CAN REUSE LOST NUTRIENTS TO BE TRANSFORMED INTO PROTEIN-RICH FOOD PRODUCTS***

By reintroducing former foodstuff into insect production, the European insect sector generates safe products suitable in animal feed as well as for human consumption. With its highly productive vertical farming practices, insect farming is among the most efficient protein production systems, demanding less land use than most agricultural practices. The high protein content of edible insects makes them an innovative alternative protein provider. Edible insects can complement low-protein diets thanks to their diverse amino acid composition. In addition, they contain numerous vitamins, minerals, polyunsaturated

[1] Article 18 of Regulation (EC) No 1069/2009 of 21 October 2009
[2] Commission Regulation (EU) 2017/893 of 1st July 2017
[3] Commission Regulation (EU) 2021/1372 of 17 August 2021

fatty acids (MUFA, PUFA), and even prebiotic fibres - important for the metabolism and immunity of the human body.

Novel food sources of nutrition should be evaluated considering their added value with respect to targeted nutrition

Maternal or child nutrition, sports diets, or healthy aging) – as an individual ingredient (e.g. fortifier) or in combination with other traditionally used ingredients.

Edible insects should be explicitly included in the EU and national dietary guidelines and as part of the 'favourable food environment'

The added value of edible insects in tackling nutrient deficiencies (such as iron or vitamin B12 deficiency) or providing high-quality amino acids to low-protein diets. Such measures would support the EU citizens in making more healthy diets, with fewer nutrient losses to the environment.

- ***INSECT FRASS REDUCES THE NEED FOR THE USE OF CHEMICAL ENVIRONMENTALLY DAMAGING FERTILISERS***

In insect farming like other farming practices, insects generate by-products that can be applied as fertilising products in agriculture. By-products from insect farming activities, such as insect frass, can play a key role in providing local solutions to improving soil fertility. Its application is consistent with circular economy's principles, by reintroducing valuable materials into the food production chain - as an alternative to linear models that would end with its disposal.

The valorisation of insect frass as organic fertiliser

It generates essential complementary revenues for insect producers and is a sustainable solution for European farmers and gardeners.

- **INSECT FARMING CONNECTS LOCAL AGRICULTURAL SUPPLY CHAINS AND PROMOTES THE DIVERSIFICATION OF INCOME STREAMS FOR FARMERS**

Enhancing circularity throughout the agri-food chains is key to reducing losses - the sustainability of our food system will be enhanced if farmers are given the opportunity to use biomass residues and new feed products to feed their animals.

In the CAP post-2020, agri-environmental measures should be established

These, in the framework of national rural development programmes to support farmers who decide to diversify their activities by developing insect production systems.

Concurrently, such national incentives - supporting local initiatives that aim at transitioning towards a 'circular/ integrated' local supply chains approach (reuse of locally/regionally produced co-products from farmers and agri-food actors to feed insects and use of insect products as feed by livestock farmers) shall further be stimulated. These measures would indeed contribute to bolstering the competitiveness of these actors while contributing to the revitalisation of rural economies.

- ***INSECT FARMING CAN TRANSFORM NUTRIENT LOSSES NOT USEFUL FOR THE FOOD OR FEED CHAINS INTO OTHER VALUABLE OUTPUTS SUCH AS BIOFUELS***

Insect products and by-products do not constitute valuable material for direct valorisation 'within the food chain' only. These may also be used for technical purposes such as cosmetic industry, bio-based fuels, or to produce other bio-based materials such as bioplastics.

Further exploring the added value of catering waste

Ensuring the suitability of the end-product, in line with animal feed requirements. In addition, by-products from the bioconversion of catering waste could also be revalorised outside the food chain (in biofuels, cosmetics, or other technical applications).

- ***INSECT FARMING CAN IMPROVE EU SELF-SUFFICIENCY***

Insect production can ultimately improve the EU's self-sufficiency in terms of food, feed, and fertilising materials - 'fewer imports would be needed and the expansion of agricultural land outside the EU would be minimised', in line with the EU's Green Deal aim to reduce the loss of biodiversity.

Insect Farmer's access to National Support Mechanisms

Full access from innovative protein sources, such as insects, to national support mechanisms that are open to economic actors active in the food and feed sector (e.g., direct financial support and/or other aid open to food and/or feed sectors - including at fiscal or social level).