

IPIFF contribution on the development of a European Protein Plan

Preliminary remarks

The International Platform of Insects for Food and feed (IPIFF) is an EU non-profit organisation which represents the interests of the insect production at European level. Composed of 43 Members, IPIFF promotes the use of insects for human consumption and insect derived products as a top tier source of nutrients for animal feed.

By the end of the year, the European Commission will publish its European Protein Plan with the aim of supporting the cultivation of protein crops in the EU. While this report is expected to target specifically plant products, we believe that a successful strategy should also take into consideration animal origin materials, including alternative sources such as insects.

The present document explains how in her view the insect sector may contribute to respond to the challenge of the EU protein deficit (*see chapter 1*) and sets a series of general recommendations for the EU protein plan along that line (*see chapter 2*).

I. Contribution of the insect production sector to address the EU protein deficit

❖ Global Context & General Remarks

- **The European Union (EU) is highly dependent on protein imports** for animal feed use, which are not subject to the same regulatory constraints as European farmers. Notably, The EU imports more than 60% of the protein-rich raw vegetable materials that it needs to balance livestock feed rations.
- At the same time, **global demand for livestock products** is expected to **more than double** between 2000 and 2050, while **livestock production already accounts for 70 percent** of all agricultural land used worldwide, including cropping areas for the production of animal feed. Competition for resources (land, water & fertilizers) between animal feed production, human food and fuel production, contributes to **increase the pressure on the environment** (e.g. water supply, deforestation or soil decline in producing countries, overfishing).
- In spite of increased production of protein-rich raw vegetable materials - notably as result of the incentives measures introduced under the Common Agricultural Policy (CAP) in 2013 - **the European 'protein deficit' remains significant**. In a context of high price volatility & possible shortage of protein crops, the economic viability of the EU feedstock & livestock sectors is placed at risk.
- In the light of the above challenges the **EU Legislator should contribute to foster the development of alternative sources of proteins, beyond the sole range of vegetal products**. Although they constitute a minor proportion of the present protein supply, animal protein sources contribute to meet the needs of certain animal species in a more efficient way than proteins of vegetable origins.

- Among animal protein sources, **insects represent a ‘promising’ and ‘reliable’ solution** to the challenges that the EU Protein Plan intends to overcome, provided that **appropriate action is taken at European level** to boost the development of this emerging sector.
- The insect sector has indeed the potential to bring promising **feed protein solutions to European livestock producers**, while representing interesting **opportunities for European farmers** interested in **diversifying** their production activities.

❖ **Characteristics & advantages of insects as food and feed: quick facts**

⇒ **Nutritional benefits of insects**

- Insects are part of the **staple diet** of around **2,5 billion people** in large areas of the world. Rich in protein, insects are also a **natural component of the diets of animals** such as carnivorous fish, poultry & pigs (e.g. insects can provide up to 40% of the trout diet needs).
- Insects products are characterized by **high protein levels**, which vary between 40% & 75%. **High in key amino acids**, insects also promote nutrient uptake and show **promising results in terms of animal growth performance**, therefore representing a promising complementary source material in feed formulae for aquaculture & livestock animal.
- Particularly rich in protein, essential amino acids, fatty acids and vitamins, edible insects also have a **well-balanced nutrient profile to respond to human’s dietary needs**, in combination with other protein-based products.

⇒ **Environmental benefits**

- Replacing a proportion of the protein currently used by livestock & fish by **‘sources that are not reliant upon cropping area’¹**, insect production may contribute to increase food security through **increasing the availability of food crops for direct consumption**.
- Overall, **feed-to-meat conversion rates** of insects are **extremely efficient**.
- Furthermore, insects have the potential **to convert non-used co-products and residues from the agri-food industries into ‘high value materials** (e.g. products with high protein content) therefore offering a new outlet for ‘unexploited or ‘underexploited resources’, in accordance with the ‘waste hierarchy principles’.

❖ **Development prospects & challenges faced by the European insect producers**

- While it remains much smaller than the overall animal protein market, the **market growth rate** for **‘alternative protein’ sources**, such as insect proteins, **is significant²**. Protein demand being forecasted to surpass supply for the coming decades, insects may contribute to fill this growing gap.
- Today, the **European insect industry is not in a position to meet the growing demand** for animal protein sources due to insufficient production capacity. To overcome this challenge and help the sector realize its potential, **more investment in the sector** is therefore needed.

¹ Most EU producers use exclusively indoor systems, which allows for proper insect growth and development

² According to Rabobank market study from 2017, the current size of the market for alternative protein sources is of 130,000 tonnes for EU

- Yet, the European insect sector is going on ‘the good path’, by investing massively in semi-automation system and modern equipment, which explains why European insect companies are today a world leader in terms of innovation & technological development. **Increased research efforts in the field of insect production** (e.g. insect biology, optimization of rearing conditions or diet formula) **are however necessary** boost its development and increase the volume of available products on the market.
- Furthermore, the insect production sector will have to **continue to perform research on the nutritional value and/or functional characteristics** of its products in order to best respond to the needs of livestock producers and consumers.
- In order to plan their investments and deploy their production activities at wider industrial scale, **European insect producers also need sufficient visibility at ‘regulatory level’**: while the possibilities or using insects in food or feed are still limited in Europe today, the **recent EU authorisation of insect proteins as fish feed** - i.e. effective from 1st July 2017 - as well as the entry into force of the ‘new’ **EU novel food legislation** have largely modified the European Regulatory landscape. We trust that these recent policy breakthroughs will pave the road for more ambitious policies and legislations, in order to enlarge the possibilities for using insect proteins for animal feed purposes.

II. IPIFF Recommendations for a successful EU Protein Plan

❖ General recommendations

In our view, a successful **EU Protein Plan shall take into consideration all possible sources of proteins**, beyond plant materials, and including ‘**alternative**’ sources (e.g. insects, algae or microbial proteins sources). Although they constitute a minor proportion of the present protein supply, such materials indeed contribute to satisfy the needs of certain animal species in a more efficient way than proteins of vegetal origin (i.e. for the different nutritional requirements of animals, different protein sources are needed).

Against this background, our organisation considers that EU Policy makers should **create the conditions to boost and/ or support the development of such ‘alternative sources’**, in addition to other plant proteins crops, such as leguminous (e.g. pulses, peas). Notably through the following set of measures:

- Opening of new ‘EU legislative opportunities’;
- Financial Incentive measures;
- Educational campaigns.

Finally, the decisive role that alternative sources such as insects may play in **the context of global environmental and sustainable developments objectives** should be recognized (e.g. commitments to the United Nations Sustainable Development Goal n° 12 ‘*Ensure sustainable consumption and production patterns*’). More generally, we believe that the content of the Protein Plan and its role should be translated in **the different EU policy frameworks affecting the EU protein supply** (Action Plan for the Circular Economy, Food 2030, The CAP “post 2020”).

❖ **‘Pave the road’ to new EU legislative opportunities**

The EU Protein Plan should recognize the valuable contribution of new proteins such as insects to meet the specific needs of their animals (poultry and pig producers (e.g. farmers). A number EU regulatory barriers today hinder possibilities for European farmers to avail from such products.

Against this backdrop and provided that food and feed safety objectives are not being compromised, IPIFF pleads for the following regulatory changes³

- Relax the EU feed ban rules so as to authorise **the use of insect Proteins in feed for other non-ruminant livestock animals** (pigs & poultry species)
- Anticipating possible regulatory changes, The European Food Safety Authority should be mandated to assess the potential risks associated with the use of **unsold products from supermarkets or discarded materials due to manufacturing or packaging defects or food losses originating from restaurants or catering establishments** as feed for insects.

❖ **Incentives towards ‘close to market’ solutions and local supply chains integrating insect producers**

- IPIFF supports **EU research projects aiming at promoting research activities** which would help to advance future regulatory developments on the opening of new markets for insects under the **FP 9 programme**.
- In the CAP post 2020, **agri-environmental measures** should be established in the framework of **rural development programmes** to support farmers who decide to **diversify their activities** towards insect production or to support **local initiatives towards ‘circular/integrated’ local supply chains approaches** (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). Such measures would indeed be consistent with global environmental objectives, while contributing to the revitalisation of rural economies.

❖ **Education and information campaigns**

The European Commission services should investigate the possibilities of launching educational campaigns highlighting the benefits of consuming a variety of protein sources produced in the EU, while **fostering consumers’ acceptance of alternatives sources of proteins** (e.g. insects) in Europe.

³ IPIFF position on the use of insect production in animal feed (26 July 2017)