THE EUROPEAN INSECT SECTOR TODAY: CHALLENGES, OPPORTUNITIES AND REGULATORY LANDSCAPE

IPIFF vision paper on the future of the insect sector towards 2030

ipiff

Global and European perspective

With the world population expected to exceed 9.7 billion by 2050, food production needs to increase by 70%[1]. Yet already today, the food system is under pressure. Insect protein responds to the demand for sustainable and high-quality protein to feed a growing population.

1/3 of food is wasted

One-third of food is wasted, either rotting in consumers' and retailers' bins or spoiling due to poor transportation and harvesting practices, according to the Food and Agriculture Organization (FAO)[2]. In the EU alone, close to **90 million tonnes** of food is wasted per year and this is expected to rise[3].

Global demand for animal products is expected to more than double between 2000 and 2050 so animal feed production is increasingly competing for resources with human food and fuel production. Today, a high share of animal feed in the EU is imported. Insect protein is approved for fish farming in the EU and could provide a solution to feeding other livestock in the future.

The market for insect production is growing steadily with economists forecasting a 20% increase over the next five years[4].

Insects as animal feed

Insects are a natural component of the diets of animals such as carnivorous fish, poultry and pigs. They are high in protein – from 50% to 82% (as a dry product)[5] – and can be added to animal feed – with up to 40% insect content for fish feed and 30% for chicken feed.

Insect products have an amino acid profile that makes them highly-digestible for animals. The amino acid profiles of most insect species tested in feed formula for farmed fish show a good correlation with the fish's specific needs[6].
Insects also promote nutrient uptake and show promising results in terms of animal growth performance. This supports their use as a complementary source material in feed formula for aquaculture and livestock animals.

Some insects also contain bioactive components like lauric acid, antimicrobial peptides and chitin which have immune-boosting properties. Preliminary results have shown that certain bioactive insect components led to improved immunity and reduced mortality rates when used in aquaculture feed e.g. for shrimp and salmon.

Preliminary studies[7] have shown that insects have a lower environmental footprint compared to other livestock animals. Insect producers and research institutes are collaborating to generate more data.

[1] Food and Agriculture Organization (FAO): http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf

[2] FAO: http://www.fao.org/save-food/resources/keyfindings/en

[3] Estimates of European food waste levels (2016): http://www.eu-fusions.org/phocadownload/Publications/Estimates%20of%20European%20food%20waste%20levels.pdf

[4] Meticulous Research (2018): https://www.meticulousresearch.com/edible-insects-market-2023

[5] Rumpold and Schluter (2013) Levels may vary across species and production processes (Fasakin et al. (2003); Banjo et al. (2006))

[6] Hasan (2001); NRC (2011); Alegbeleye et al. (2012)

[7] E.g. Oonincx and de Boer (2012)

The insect market today

Insects in animal feed

Today insect protein is used in fish feed and pet food. The next step will be to authorise the use of insect protein for poultry feed and other livestock.

Fish feed

Fish farming, or aquaculture, is expected to provide 62% of the global fish supply by 2030[8]. This means the demand for fish meal and fish oil to feed farmed fish is also increasing. Changing climatic conditions in Peru have affected the availability of fish meal and fish oil, leading to a decline in availability and high volatility on the market. Processed animal proteins (PAPs) which are allowed to be used in fish feed, are not yet included in many of the feed products on the market today. Insect protein has similar characteristics to PAPs and provides a good, sustainable alternative.

Pet food

Pet food is a mainstream market for European insect producers. Insect products are well-suited to the particular needs of pet food, due to their high digestibility and palatability. Several European pet food companies already incorporate insects in their feed formula, notably as a means to diversify their products' range e.g. in hypoallergenic products. This trend is expected to continue to grow in the next few years.

Poultry feed

Today insect proteins cannot be fed to poultry as legislation passed after the BSE crisis in the late 1990s prevents processed animal proteins from being fed to livestock[11]. Only fishmeal may be used. And yet, over 90% of EU insect feed producers see poultry feed as a 'promising opportunity'[12].

The demand for formulated fish feed presents an opportunity for the insect sector. In July 2017, insect proteins from seven insect species[9] were authorised in the EU for use in aqua feed, opening new feed markets for insect producers. Like other farmed animals, these insect species may only be fed with 'feed grade materials' such as materials of plant origin, processed eggs, milk and their derived products.

Above 5,000 tonnes of insect protein have been commercialised by European insect producers in total, since the authorisation of insect proteins for use in aqua feed. Today, the aqua feed market consumes more than 50% of European animal feed made from insects and this is expected to increase in the coming years.[10]

[8] FAO (2014): http://www.fao.org/news/story/en/item/213522/icode

[9] Black soldier fly (*Hermetia illucens*), common housefly (*Musca domestica*), yellow mealworm (*Tenebrio molitor*), lesser mealworm (*Alphitobius diaperinus*), house cricket (*Acheta domesticus*), banded cricket (*Gryllodes sigillatus*) and field cricket (*Gryllus assimilis*)

[10] IPIFF questionnaire – October 2018

[11] Commission Regulation (EU) No 56/2013: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R0056

[12] IPIFF internal questionnaire - September 2019

Testimonial: Alexander Döring, Secretary General of the European Feed Manufacturers' Federation (FEFAC)

"Insect protein has been successfully incorporated into aquafeed formulations since the EU's approval in 2017. Nutritionally, insect protein has proved to be a highly-valued complementary source and its demand may only increase as adequate supply is created. Its approval in poultry feed will most certainly be instrumental in making it an interesting additional source of protein. While insect protein is not expected to replace current protein sources, it is important that the sector continues to perform research on the nutritional value of its products, e.g. to adapt to various animal species, age or livestock production systems, as well as risk assessments on feed safety, including process technology and the use of innovative substrates which do not compete with traditional feed ingredients."

Consumer perception (PROteINSECT Project)

In a 2014/2015 survey undertaken by PROteINSECT[13]:

- 70% of respondents said that it is acceptable to feed insect protein to farmed animals including fish
- 73% would be willing to eat fish, chicken or pork from animals fed on a diet containing insect protein

Insects as food for human consumption

In many parts of the world, insects are part of the diet, for at least two billion people according to the FAO. Elsewhere, the way we eat is changing and the number of people willing to try insect-based food is increasing. This trend is supported by positive media coverage and greater availability of insect products.

The nutritional benefits and low environmental stress of insects further boost the trend. Flexitarians eat less meat and are generally more aware of food sourcing and sustainability, as are those buying organic products or following a paleo diet. This change in attitudes around food creates new opportunities for the insect protein sector.

The growing demand for high protein food for sport nutrition, dietetic food or in food supplements creates further opportunities. Currently, these are niche markets but are forecasted to grow rapidly in the next few years.

Insects can be used in a range of ways. They can be incorporated in food as whole insects in fried or dried form, whole insects processed into a granular powder or paste to increase nutritional value or functionality, all the way to extracted products, for example as protein applied to food.

Yet, insects are not expected to replace meat in our diets entirely. The varied eating styles and diets across Europe mean a wide variety of products and ingredients are needed.

Photo credit: Proti-Farm

[13] PROteINSECT Report Summary (2016): https://cordis.europa.eu/search/en

Nutritional characteristics[14]

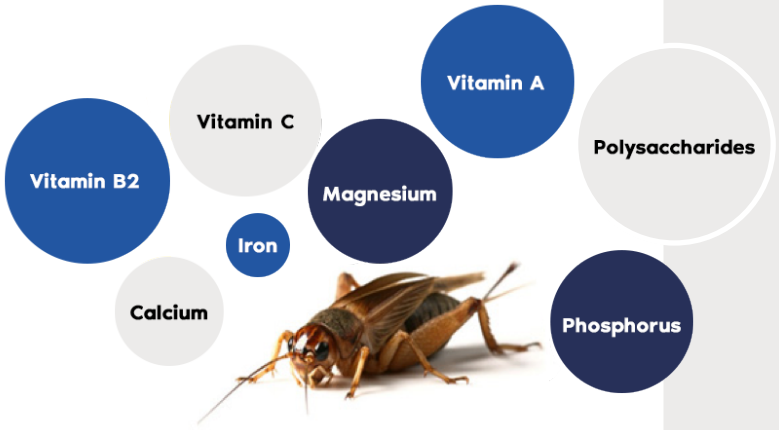
Rich in protein and essential amino acids

Good source of unsaturated fats (e.g. good Omega 3:6 balance)

Rich in vitamins and minerals (vitamins A, B, B12, magnesium, iron...)

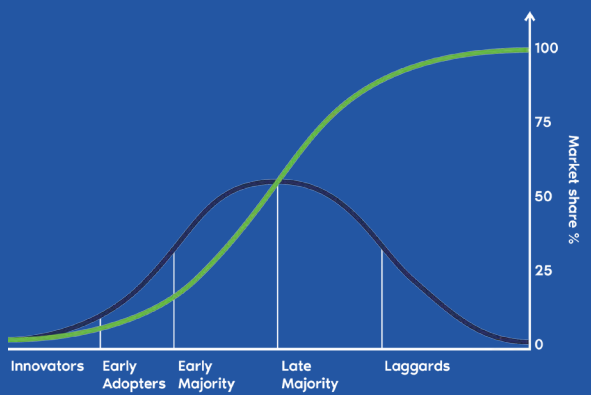
Prebiotic fibres like chitin provide nutrients for probiotic gut bacteria

Digestibility is higher than many vegetable-based protein sources but slightly lower than traditional animal protein sources



Testimonial: Jonas House, Lecturer at Wageningen University, Sociology of Consumption and Households, Expert in public acceptance of insects as food

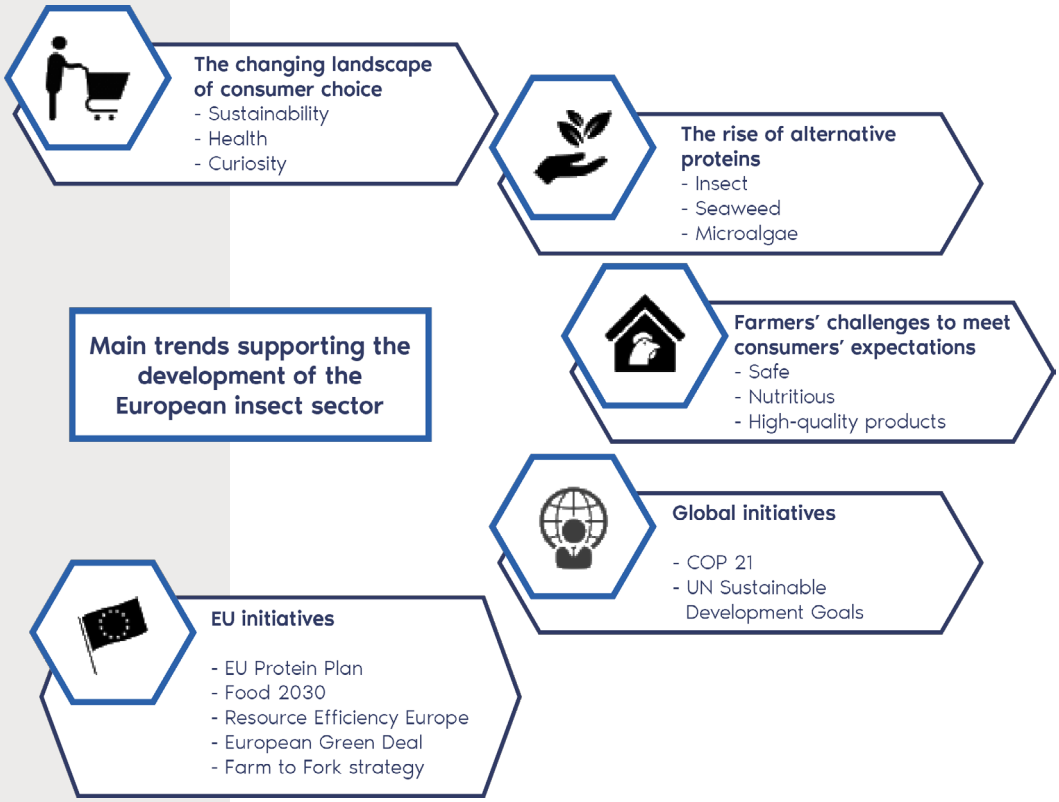
"Considering the innovation adoption curve (see graph below) in relationship to the acceptance of insects as food, the 'yuck factor' is not the main issue we should focus on. To achieve wider market acceptance, producers and advocates should focus on the high satisfaction of early adopters. The 'early majority' of consumers will be drawn to insect consumption if others lead by example. They will be convinced when told by family and friends, "I have tried this delicious insect dish, you should try it too!""



Innovation adoption curve

[14] The nutritional values of edible insects are variable across species and production processes

Main trends supporting the development of the European insect sector



Main challenges for the industry today

As in all emerging sectors, the insect protein industry faces some challenges which IPIFF is working to overcome, supported by its members.

1. Need to upscale

To reach its full potential, the insect industry needs to scale up. This can readily be achieved due to the exponential reproduction rate and short life cycle of insects.

Automation and controlled production systems will make insect production less labour-intensive. Insect producers are already on track as significant investments are being made in semi-automated systems in Europe.

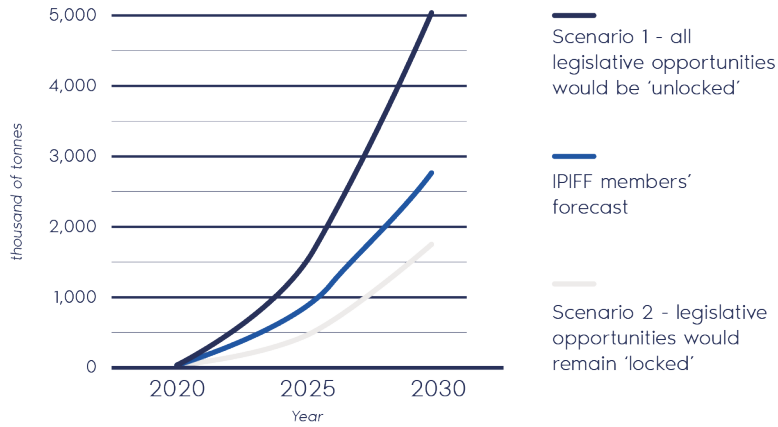
The ideal conditions are being developed for insects to thrive in, taking into account factors such as their optimum temperature and humidity requirements. Mastering these factors will lead to reliable supply and stable quality while increasing production capacity in Europe.

By increasing the scale of production, insect farmers will be able to increase the price competitiveness and stability of their products compared to other sources of protein.

By September 2019, European insect producers had raised more than €600 million through investments and are expecting to raise more than €2.5 billion by the mid-2020s.

Over 6,000 tonnes of insect protein are produced in Europe annually and by 2030, IPIFF expects it to be around 3 million tonnes. With the right legislative framework, the sector can grow to around 5 million tonnes a year (Scenario 1). This would require diversifying the substrates authorised for insect farming and opening the poultry and swine feed markets for insect-derived protein earlier than anticipated. However, if these legislative changes are not made, the sector's growth would decelerate to around 2 million tonnes of protein per year by 2030 (Scenario 2).

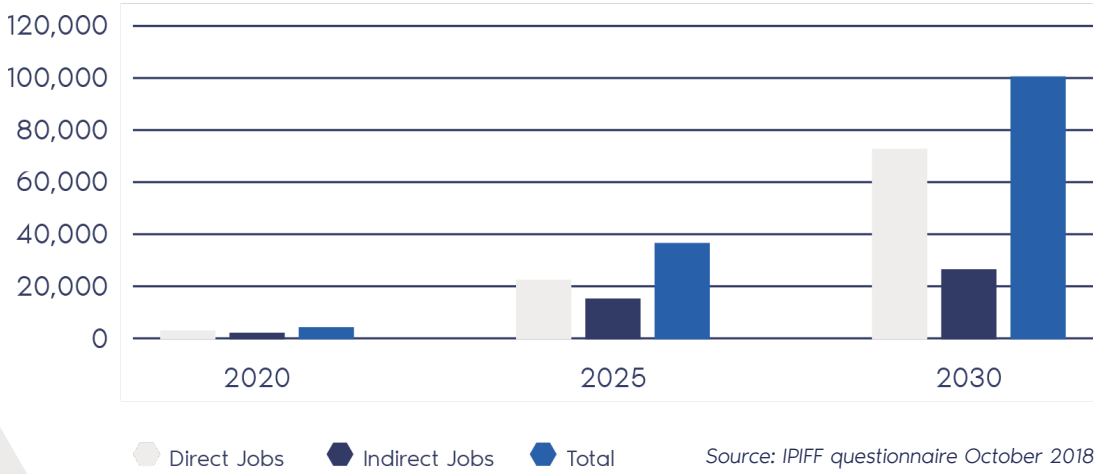
Estimated volumes of production of insect protein until 2030 in Europe (in thousands of tonnes)



Source: IPIFF internal questionnaire September 2019

With 3 million tonnes of insect protein (IPIFF forecast for 2030) produced in Europe, fewer imports of high-protein feed materials would be needed and the expansion of agricultural land outside the EU would be minimised, saving an area the size of Belgium.

With the growth of the insect sector and higher investment into it, more jobs will be created



Source: IPIFF questionnaire October 2018

2. Addressing consumers' expectations

Livestock farmers in the EU have to meet consumers' expectations for safe, nutritious and high-quality products of animal origin. They are also expected to address societal challenges such as reducing the use of antibiotics. Insect producers must therefore produce nutritious and high-quality products in order to respond to these new demands.

3. Regulatory challenges

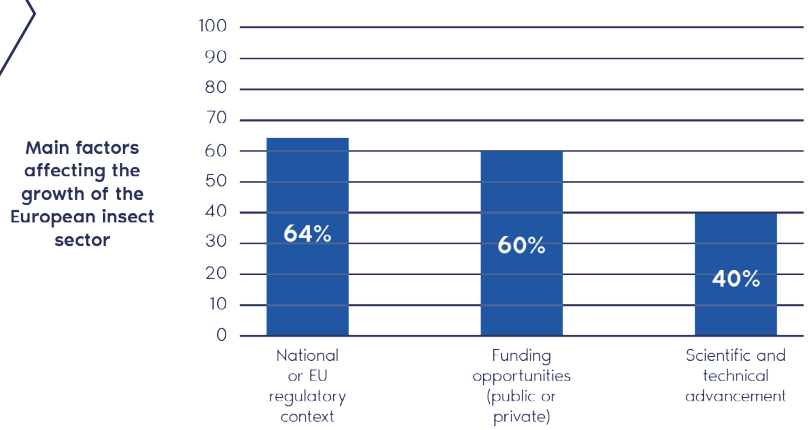
Food and feed safety is essential for the insect industry. Like any food or feed company in Europe, insect producers have to follow principles established under the General Food Law, the cornerstone of the European Food Safety risk management policy.

- Responsibility for the safety of the feed/food placed on the market lies with individual feed/food business operators
- Traceability of products must be ensured

In the EU today, the opportunities for using and feeding insects are still quite limited. Insects are for example not allowed to be used as feed for poultry and pigs and may not be fed with former foodstuff containing meat, fish or food losses originating from restaurants or catering establishments. These restrict the market and efforts are ongoing to broaden the opportunities available.

The legal framework was identified by IPIFF in its 2019 questionnaire as the main factor impacting the growth of the insect sector.

The steady development of the insect sector is impacted by the regulatory framework



Source: IPIFF internal questionnaire September 2019

Insect farming is changing the traditional waste hierarchy

Currently, one-third of all food is wasted. Measures are being taken to create a healthier, more sustainable food production and consumption system which produces less waste.

To reach that goal, the European Commission launched the **Food 2030** research and innovation policy which responds to the UN Sustainable Development Goals (SDGs). SDG 12, 'Ensure Sustainable Consumption and Production Patterns', is relevant for the insect sector. It addresses ways to be more sustainable, to reduce environmental impacts and encourages consumers to shift to more nutritious and safe diets.

Insect farming contributes to tackling these societal challenges by feeding insects with co-products from the agri-food industries and with resources which are currently not being used and not or no longer destined for human consumption, so-called 'former foodstuff'.

Insect producers use co-products from the grains, starch, fruit and vegetable supply chains, such as bran, distillers grains, unsold fruit and vegetables, including peels and other by-products, as well as products arising from the food manufacturing process (other than final products). In addition, insects also rely on unused outputs from local food processors, e.g. biscuits or pastry, local artisans e.g. bakers or products from supermarkets which are unsold for technical or logistical reasons. These products have low environmental footprints because they are co-products of the food chain and do not require any new processes for their production.

Generally, the substrate used in insect farms is a mixture of different ingredients, providing a balanced diet for the different life-stages of the larvae.

Substrates used by IPIFF members to feed their insects

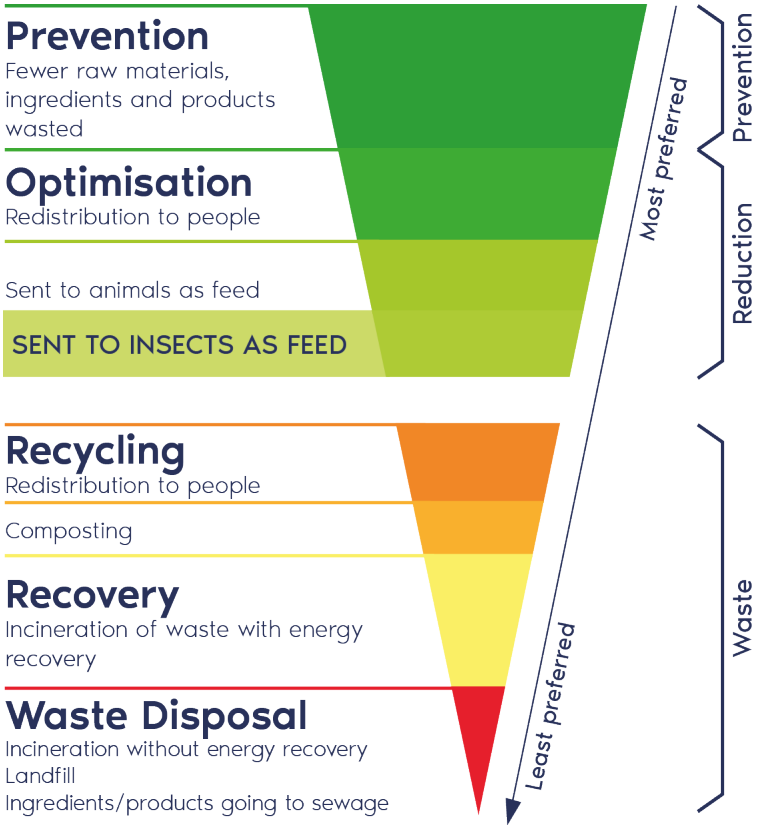
- Co-products from the agri-food industries
- Unsold products from the food industry
- Other

By turning lower-value materials and ingredients with low environmental footprints into high-value materials, such as proteins, insect producers offer a new outlet and a sustainable alternative for unexploited or underexploited resources, in accordance with the waste hierarchy principles.

Such underexploited resources are growing due to the competition faced by EU cereal producers from other neighbouring countries e.g. Russia, Ukraine and Kazakhstan. Agri-food companies active in these sectors are seeking new outputs for their products and by-products.

Furthermore, cattle production, traditionally the main market for by-products, has been declining in the EU in recent years[15]. EU producers of cereal by-products need to secure new markets for their outputs. Insects can be fed with these by-products and as such constitute a new market, which does not compete with and is complementary to the feed industry.

Insects can add a new layer to the waste hierarchy



[15] Short-term outlook for EU agricultural markets in 2019 and 2020: https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/short-term-outlook-autumn-2019_en.pdf

[16] EU Circular Economy Package: https://ec.europa.eu/environment/circular-economy/

[17] More on: ipiff.org

[18] Membership data from October 2018

Closing the loop

The European Commission adopted a **Circular Economy** Package[16] to help European businesses and consumers use resources in a more sustainable way. The initiative recommends clarifying EU legislation to ensure that former foodstuff and by-products from the agri-food chain may be used in feed production.

European insect producers are already contributing to the development of a more Circular Economy by selecting substrates from local partners in a small geographical area. Through these partnerships, producers maintain a network of activity in rural and agricultural areas.

IPIFF - The International Platform of Insects for Food and Feed

The International Platform of Insects for Food and Feed[17] (IPIFF) represents the insect production sector to EU policymakers, European food and feed chain stakeholders and citizens.

IPIFF's 55 members, from 18 European countries[18], are mostly small and medium-sized enterprises producing insects for the European market.

"Education is a global priority for insect farming and insect consumption. Delivering insect-positive messages and information to the public is vital to moving the industry forward in a positive way."
IPIFF President, Antoine Hubert

IPIFF's objectives are to:
- Promote insects as a top-tier source of nutrients for food and feed
- Consolidate dialogue with EU public authorities and advocate for appropriate legislative frameworks without discrimination in EU Member States in order to maximise opportunities for insect producers
- Support insect producers in the effective implementation of food and feed safety legislation
- Promote and develop shared standards and best practices

IPIFF's activities are articulated around three main pillars:
- Promoting the use of insects and advocating for an appropriate legislative framework
- Supporting the development of the insect sector
- Communicating the benefits of eating insects and cooperating with all stakeholders

Non-European members
BIOBEE, Entofood, AgriProtein, Beta Hatch, Entoprotech, FreezeM

Austria: Livin Farms
Belgium: Inagro, Thomas More, University of Gent
Bulgaria: Nasekomo
Croatia: Mudro Bioindustry
Denmark: Danish Technological Institute, Haarslev, Enorm
France: Ynsect, Agronutris, Jimini's, NextProtein, NextAlim, Mutatec, Innovafeed, Protifly, Entomojo, INVERS
Germany: Hermetia, Snack Insects, Plumento Foods, Illucens, SENS Foods, Reinartz, GreenCycle
Ireland: Hexafly
Italy: University of Parma, Italian Cricket Farm
Lithuania: Insectum
Netherlands: Protix, Proti-Farm, Koppert, Amusca, Entogourmet B.V., NGN
Poland: HiProMine
Spain: MealFood Europe, Universitat Rovira i Virgili, Proteinsecta, Leitat, Entomo Agro-Industrial, Entogreen
Sweden: Tebrito
Switzerland: Essento, BITS, Rethink Resource
United Kingdom: Entomics, Entocycle

1. IPIFF promotional and advocacy activities towards adapting existing EU policies and legislation

Adapting EU policies and legislation

IPIFF developed a three-step plan to have insect protein authorised for animal feed and to allow new substrates to be used for feeding insects. The first step of the plan, authorising the use of insect proteins in aqua feed, has been completed and the next targets are part of IPIFF's work programme.

IPIFF works through a number of working groups, drawing on the expertise of its members and the secretariat in Brussels.

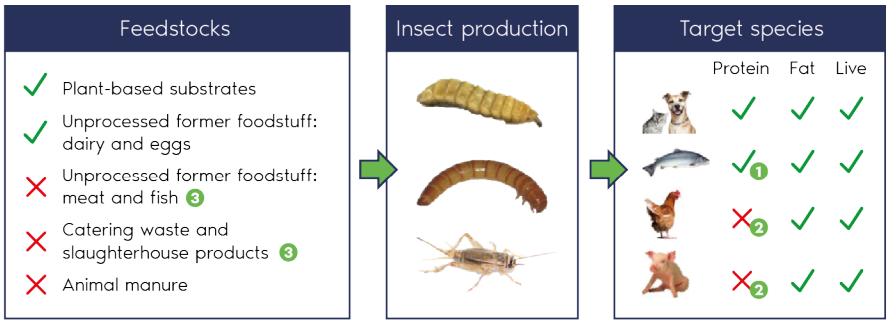
Taking care of food hygiene and consumer safety

Food hygiene legislation and EU legislation on food information for consumers need to be revised to include the insect sector.

Through its Working Group on 'Food Safety and Consumers' Information', IPIFF is participating actively in the preparation and development of EU hygiene standards for the production and processing of insects for human consumption (Regulation 853/2004 laying down specific hygiene rules for food of animal origin).

The group provides guidance to IPIFF members on the implementation of the 'general' EU food labelling rules and

IPIFF roadmap on the use of insects in animal feed



Target	Timeframe
Authorise insect proteins for aqua feed use	Target achieved Authorisation effective since 1 July 2017
Authorise insect proteins for use in pig and poultry feed	EU discussions ongoing. Approval by Member States expected in 2020
Authorise 'former foodstuff' and/or catering waste as feed for insects	1/ Facilitate the wider use of former foodstuff: Immediate policy priority 2/ Authorise the use of former foodstuff containing meat and fish: Target 2022 3/ Authorise the use of catering waste: Early/mid-2020s

[19] Regulation (EC) No 178/2002 (28 January 2002) and Regulation (EC) No 852/2004 (29 April 2004)

[20] Regulation (EC) No 183/2005 (12 January 2005)

[21] More information on IPIFF's website: http://ipiff.org/insects-novel-food-eu-legislation

suggests legislative adaptations to develop tailor-made regulatory provisions for insect products. These include the labelling of potential allergens and the denomination of insect ingredients on prepackaged products.

In July 2019, IPIFF published a guidance document on EU food labelling standards applicable to insects and insect-based products, anticipating the first novel food authorisations, expected in 2020.

IPIFF's priorities are to have:
- Sufficiently robust standards to ensure safety conditions are met while ensuring these can be realistically enforced
- Appropriate procedures in place to ensure imports of insect products into the EU comply with appropriate EU food and feed safety standards

Going organic with insect products

The organic market is growing and is an opportunity for insect producers to offer a higher-value product. Insect products intended for food or feed are not yet eligible for EU organic certification as currently there are no standards defined in EU legislation.

However, the Directorate-General of Agriculture and Rural Development is currently developing rules for the organic certification of insect production activities. To this end, IPIFF has put forward its Contribution Paper, summarising key elements which should be considered for such standards. Our association continues to promote the use of insect-derived ingredients in the diet of organic aquaculture, poultry or swine animals.

Through its Task Force on 'Organic Farming and Insects', IPIFF and its members are investigating appropriate standards for organic insect production for dissemination at future discussions between the European Commission services and Member States.

Making the most of insect by-products

Currently, lengthy and complex authorisation procedures are needed at national level to use by-products from insect production like insect frass (or faeces).

A new EU legislative proposal was adopted in summer 2019, harmonising the conditions for marketing fertilising products on an EU-wide scale.

Through its Task Force on 'Insect Frass and Fertilisers', IPIFF is assisting its members to fulfil national authorisation procedures. It is also defining standards for insect frass products to qualify as fertilisers under the new EU fertiliser legislation.

IPIFF presented its Contribution Paper on the application of insect frass as a fertilising product in agriculture in September 2019 - listing the main priorities of our association with regards to the transition towards a level-playing field for the use of frass across the EU.

2. IPIFF support activities

EU general requirements for feed hygiene and animal health

The general requirements for food hygiene[19] and animal health[20] apply to insect production. Insects kept in the EU for the production of food, feed or other purposes are considered 'farmed animals'. Under the relevant legislation, animals in the EU may only be fed with safe feed. However, EU animal welfare rules do not currently apply to insects.

EU Novel Food legislation

The EU's Novel Food legislation represents an opportunity for the insect sector as it provides harmonised rules and a simplified decision-making process.

IPIFF helps insect producers comply with food and feed safety legislation. The IPIFF 'Task Force on Novel Food' was created to help producers of insects intended for human consumption fulfil their legal obligations under the EU Novel Food legislation.

A package of two guideline documents[21] has been published. The Administrative Guidelines provide an overview of the different steps to be followed by insect producers

when applying for authorisation. The Scientific Guidelines summarise the scientific evidence which can be presented by insect producers to support their application.

In August 2019, an updated version of the Briefing Paper on Novel Food was published, presenting up-to-date information on the procedures related to the authorisation of a novel food, the state of the applications and possible future forecasts for 2020.

Guide to Good Hygiene Practices

In November 2016, IPIFF members launched a 'Task Force on Good Hygiene Practices'. The aim was to help insect producers effectively apply EU food and feed safety legislation, while encouraging them to develop a robust food and feed safety management system.

In February 2019, IPIFF published the first Guide on Good Hygiene Practices (GGHP) for insect production. The document covers all production steps from feeding the insects, breeding, killing and processing, storage or transport activities, up to the final delivery of the product to consumers or feed manufacturers. While this publication has already been sent to the EU Member States' experts on this topic, its endorsement is targeted in 2020.

Encouraging research and local supply chains

Although IPIFF's main mission is not to participate in European research projects, IPIFF works to secure appropriate EU funding for developing the insect sector, while contributing to the dissemination of research projects to stakeholders.

IPIFF encourages research activities which enhance the competitiveness of the sector and enable innovation and upscaling. The next Horizon Europe Framework Programme (FP 9) starting in 2020 is a key resource in this development. FP 9 offers an opportunity to bring researchers and insect producers together and to open up new markets.

IPIFF has presented the research priorities of the European insect sector to a public consultation organised by the European Commission, as part of defining the future of the Horizon Europe Research and Innovation Programme.

The European Commission published a 'Protein Report for Europe' in November 2018.[22] The report underlines the importance of cultivating plant-based proteins such as those from leguminous plants, e.g. pulses. IPIFF sees this plan as an opportunity to promote the use of locally-produced proteins, while also including alternative sources such as insect protein even though they represent a small proportion of the protein supply today. However, insect protein sources meet the needs of certain animal species and bring complementary value to plant proteins[23].


Photo credit: Proti-Farm

In the context of ongoing discussions on the EU Protein Plan, IPIFF made the following recommendations:

- EU research projects should allow the opening of new markets for insects

[22] Report on the development of plant proteins in the European Union - November 2018: https://ec.europa.eu/info/food-farming-fisheries/plants-and-plant-products/plant-products/cereals/development-plant-proteins_en

[23] IPIFF contribution on the development of a European Protein Plan (28 September 2018)

[24] Advisory Group – Food Chain and Animal and Plant Health: https://ec.europa.eu/food/expert-groups/ag-ap/adv-grp_fchaph_en

[25] Stakeholders – support and help to guide our work: https://www.efsa.europa.eu/en/engage/stakeholders

• Agri-environmental measures should be established in the framework of rural development programmes such as the CAP post-2020. This would support farmers who diversify their activities towards insect production, as well as supporting local initiatives aimed at circular or integrated local supply chains. These could for example include the reuse of locally or regionally produced co-products to feed insects, as well as the use of insect products as feed by livestock farmers. Such measures would be consistent with global trends.

3. Informing and engaging with stakeholders

IPIFF works hand in hand with EU policymakers such as the European Commission's Directorate General for Health and Food Safety (DG SANTE), national control authorities and partners along the food and feed chain e.g. farmers, the food and feed industry, the aquaculture sector and veterinarians. IPIFF firmly believes that by working together in a coordinated way with key stakeholders, any safety risks can be effectively managed.

IPIFF is a member of a number of 'EU institutional consultative forums' established by the EU public authorities and involving food and feed chain partners, for example the European Commission Advisory Group on the Food Chain and Animal and Plant Health[24] and the EFSA Stakeholders' Forum[25]. These serve as platforms for exchanging information, as well as helping to address potential concerns stakeholders may have about the insect sector.

Looking beyond Europe

IPIFF works with regional insect associations such as the Asian Food and Feed Insect Association (AFFIA), the Insect Protein Association of Australia (IPAA) and the North American Coalition for Insect Agriculture (NACIA) as well as other international organisations such as the FAO.
The four regional associations IPIFF, AFFIA, IPAA and NACIA met in May 2018 in Wuhan, China to lay the foundation for international collaboration.

A Codex Alimentarius specifically for the insect sector, certification, education and good hygiene practices were agreed as priorities for the development of the global insect industry.

''The Codex Alimentarius is a food code which has been established by FAO and WHO. From a global perspective, the importance to connect with these organisations will ensure we do not try to make a new body of regulations, but instead utilise existing ones.'' *AFFIA President Anne Deguerry*

''I am pleased to have seen the initial round table facilitated here in China. It is an important step for the industry on a global level that will ensure we are moving forward positively and cohesively together, to a stronger insect industry for the future''. *IPIFF Treasurer Heinrich Katz*

IPIFF Members

For further information or to become a member of IPIFF, please visit our website or get in touch.

IPIFF

info@ipiff.org

www.ipiff.org

+32 (0)2 743 29 97

Avenue Adolphe Lacomblé
59, bte 8
1030, Brussels
Belgium