THE INTERNATIONAL PLATFORM OF INSECTS FOR FOOD AND FEED

FEFAC Webinar on Circular Feed

The future potential of nutrient recovery through animal nutrition'

Christophe Trespeuch – Chairman of the IPIFF Working Group
on Feed Hygiene and Animal Nutrition,

31-03-2022

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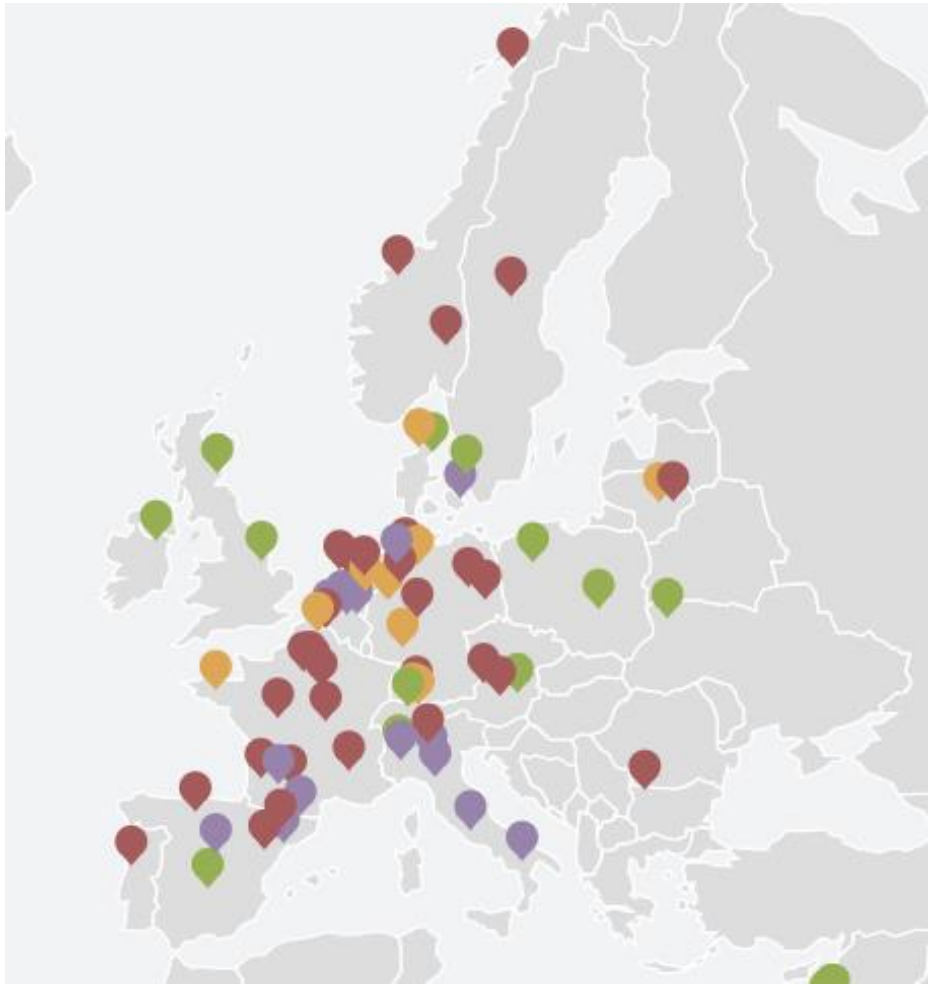
IPIFF and the European insect sector



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The European insect production sector today

- Predominantly composed of **SMEs**, serving both the **food and feed** markets (start-ups and 'older' businesses, previously active in other segments e.g. in biocontrol, pet food);

- EU production represents today few **thousand tonnes,** whereas investments account for more than **1 billion EUR** – this figure is expected to **exceed 3 billion EUR** by 2025 (source: *IPIFF internal questionnaire 2020*);

- **More than a thousand direct jobs today** – likely to exceed thirty thousand by 2030 (source: *IPIFF internal questionnaire 2020)*.

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What do insects feed on? …

Others
(13,9%)

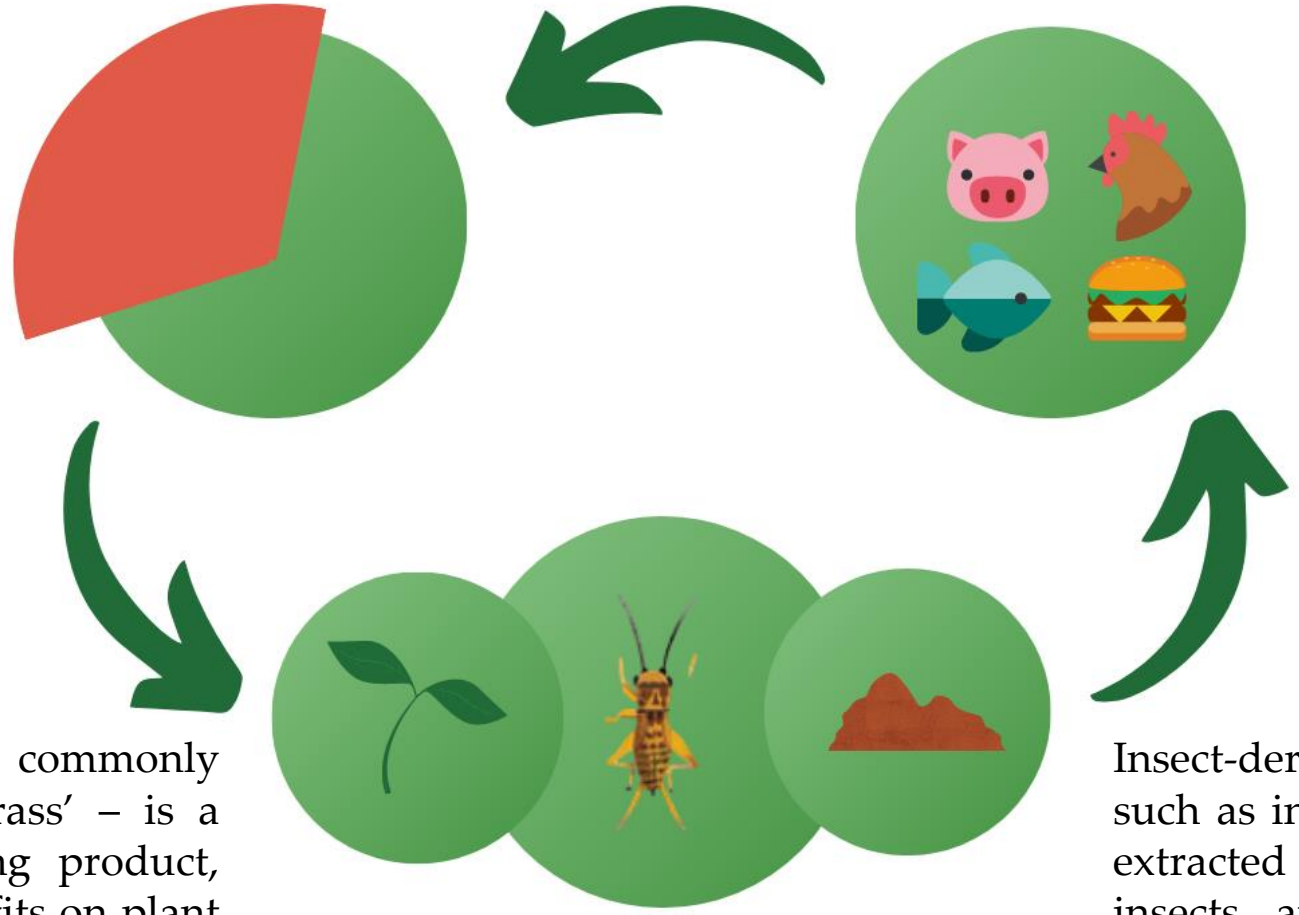
Former foodstuffs
(10,1%)

Co-products from the agri-food industries
(75,9%)

•*Source: IPIFF internal questionnaire – September 2019*

Insect farming is based on circular agricultural practices

Up to a third of the food waste generated in the EU could be 'avoided' – if products intended for human consumption (e.g. former foodstuffs) would be valued before they are classified as 'waste'.



Insects and their derived are used in food and feed applications – with proteins and lipids being the most valuable products.

Insect 'dejecta' – commonly referred to as 'frass' – is a valuable fertilising product, with visible benefits on plant health and development.

Insect-derived ingredients, such as insect powder, are extracted from whole insects and incorporated into food or feed.

Requirements on substrates of animal origin as feed for insect

- Insects reared within the European Union fall within the category of **'farmed animals'** as defined in the EU Animal By-Products' (ABP) legislation (i.e. Article 3(6) of Regulation (EC) No 1069/2009);

- Regulation (EC) No 767/2009: animals in the EU may be only be fed with safe feed - **prohibition feeding faeces** and separated digestive tract content;

- Regulation (EC) No 999/2001 prohibits to feed insects with **any PAPs**, except fishmeal

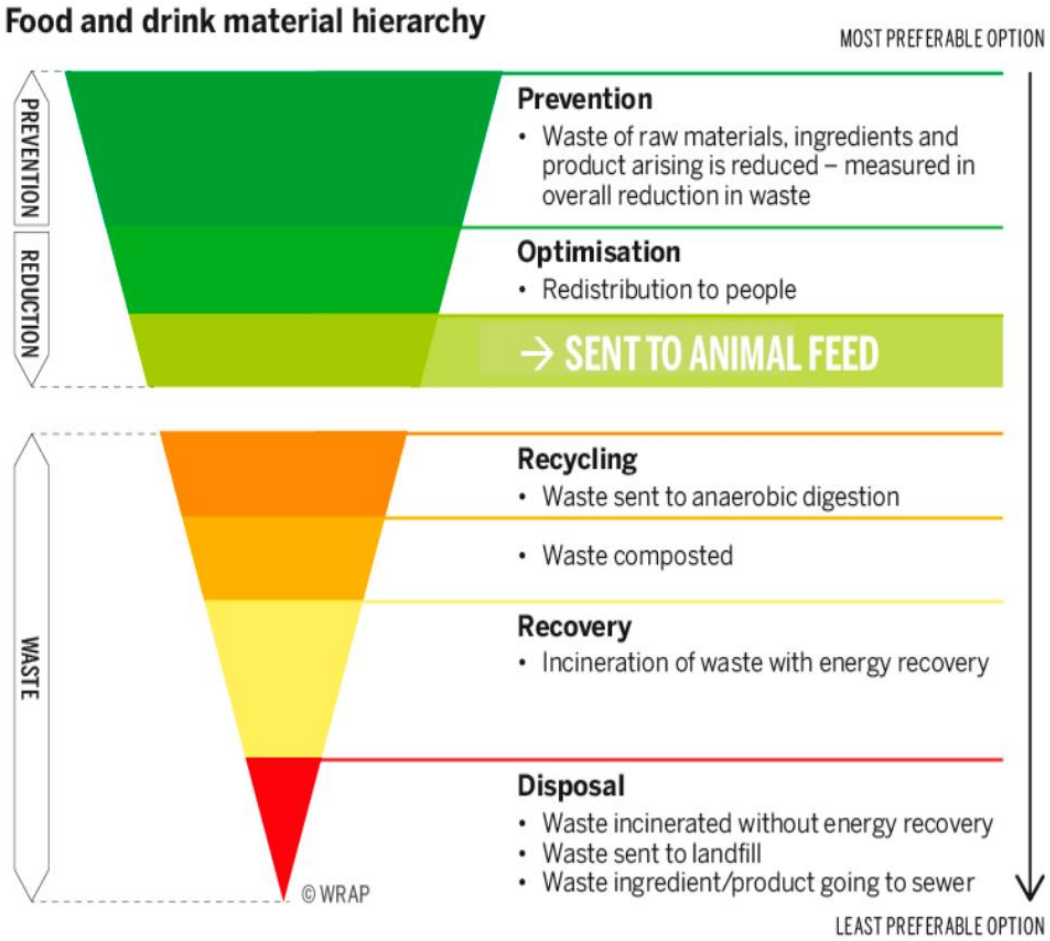
- Regulation (EU) No 142/2011 (annex X, section 10) **excludes former foodstuffs containing meat and fish.**

Source: IPIFF Guide on Good Hygiene Practices – update March 2022

EU opportunities for authorising new feeding substrates

- Diversifying the spectrum of authorised substrates used in insect farming is considered as key to **reducing the footprint** of insect farming activities while representing a promising opportunity for **tackling the problem of food waste.**

- **About 30% of the food waste** (e.g. former foodstuffs, catering waste) generated in the EU could be suitable for insect farming activities.



https://www.effpa.eu/reducing-food-waste/

What do we mean by 'former foodstuffs containing meat and fish'/ 'catering waste'?

➔ **What are 'former foodstuffs'?**

- Regulation (EU) No 68/2013 - Annex, Part A: *'foodstuffs […] which are no longer intended for human consumption'.*

- Regulation (EC) No 1069/2009 – Article 10 (f) '**Category 3 materials**: *products of animal origin, or foodstuffs containing products of* ***animal origin****, which are* ***no longer intended for human consumption*** *for commercial reasons or due to problems of manufacturing or packaging defects or other defects from which no risk to public or animal health arise'.*

➔ **Some examples:**

- non-vegetarian former foodstuffs (e.g. pizza, tarts, sandwiches);
- 'ready meals' (e.g. casserole, stews, etc.);
- canned fish or meat and their derived products;

What is 'catering waste'?

- Regulation (EU) No 142/2011 – Article 10: *'all* ***waste food*** *(…) originating in restaurants, catering facilities and kitchens, including central kitchens and household kitchens'.*

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IPIFF proposals for valorising former foodstuffs containing meat and fish

➔ **Main benefits of upcycling 'former foodstuffs with meat and fish' through insect bioconversion:**

- ***Environmental considerations***: *using such inputs in insect farming would reduce the food waste burden, improving circularity and optimising the carbon footprint of insect-derived products;*

- ***Financially sound***: *such products are economically competitive, being (occasionally) used in energy recovery (low competition materials);*

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Exploring the potential of reusing catering waste

➔ *'IPIFF wishes to explore the possibilities for authorising **catering waste** as insect feeding substrate (incl. canteen waste)* **(IPIFF Regulatory Brochure, May 2020).**

➔ This option could be limited to insect producers whose production activities are **exclusively focusing on <u>non-food or non-feed outlets</u>** (feed for producing animals) for which effective separation/segregation between different production lines (i.e. food/feed vs. technical applications) can be guaranteed.

EU opportunities for authorising new feeding substrates

- EU 'Farm to Fork' Strategy (20 May 2020): '*The EC will examine EU rules to reduce dependency on critical feed materials by fostering* ***alternative feed materials*** *such as* ***insects'.***

- REFRESH EU project – technical guidelines animal feed (29 April 2019): *'insects are only allowed to eat what (other farmed animals are allowed to eat…). Thus, they would not at this stage help to prevent more surplus leaving the food chain'.*

Parliamentary questions 30k 17k

8 May 2020 E-001080/2020

Answer given by Ms Kyriakides on behalf of the European Commission

Question reference: E-001080/2020

1. The forthcoming Farm to Fork Strategy(1) will contribute to achieving a circular economy and launch a process to identify new innovative food and feed products. The contribution of insect farming will be looked at in this context, notably as part of possible actions aimed at enhancing the utilisation of more sustainable feed sources for the farmed animals.
2. The European Food Safety Authority has not yet been requested to deliver such an opinion. This could be requested as a result of the actions to be taken forward in the context of the Farm to Fork Strategy.
3. The Commission is considering the possibility to propose allowing the use of insect protein in feed for other animal species. Discussions in that regard have started at technical level with Member States.

(1) https://ec.europa.eu/food/farm2fork_en

Last updated: 11 May 2020 Legal notice - Privacy policy

EFSA' S risk profile opinion from 8 October 2015

*When **currently allowed feed materials** are used as **substrate to feed insects**, the possible occurrence of **microbiological hazards** is expected to be **comparable** to their occurrence in **other non-processed sources of protein of animal origin**"*

*"The specific **production methods**, **the substrate used**, the stage of harvest, the insect species and developmental stage, as well as the **methods for further processing** will all have an impact on the occurrence and levels of biological and chemical contaminants in food and feed products derived from insects".*

Building on the available scientific evidence and risk-based management procedures applied by insect producers

➔ **Report of the 'Office for Risk Assessment & Research (BuRO) of the Netherlands Food and Consumer Product Safety Authority (NVWA)':**

- Sufficient evidence on processing methods used to eliminate **microbiological** contamination (e.g. method 7);

- Low risks of **chemical** contamination, since former foodstuffs should respect the MRLs for human consumption;

Netherlands Food and Consumer Product Safety Authority
Ministry of Agriculture, Nature and Food Quality

Advice on animal and public health risks of insects reared on former foodstuffs as raw material for animal feed

BuRO was asked by the Dutch Ministry of Agriculture, Nature and Food Quality (LNV) to assess the animal and public health risks of insects reared on former foodstuffs as raw material for animal feed. Based on the outcome of this risk assessment, the Minister of LNV will then be able to propose to the European Commission (EC) to make a further adjustment in the legislation that applies to the rearing of insects and the use of insects as raw material for animal feed.

➔ **IPIFF Guide on Good Hygiene Practices:**

- Chapter 4. Overview of processing methods applied to insects intended for human consumption and animal nutrition;

- Chapter 7 - Implementation of HACCP principles by insect producers.

CHAPTER 4 – **PREREQUISITE PROGRAMS: INSECT REARING ACTIVITIES**

CHAPTER 7
IMPLEMENTATION OF HACCP PRINCIPLES BY INSECT PRODUCERS

Consolidating the available scientific evidence

The Knowledge Platform on 'on new feeding substrates' was mandated by the IPIFF General Assembly to **expand the scientific knowledge-base needed** to support possible future authorisation of new feeding substrates for insects

Several research areas *(non-exhaustive list)*

- Sanitary risks related to **biological stability** of those 'new substrates'
- **Infectious diseases** which may be transmitted
- **Chemicals hazards** and risks of bioaccumulation
- Veterinary drugs residues and hormones.

Methods

- **Literature review** and identification of knowledge gaps
- Dedicated **research projects** (publicly funded projects as well as 'ad hoc' projects)
- **Experiments & analyses** in insect producing companies

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Synergies between the algae, insects, and yeast sector: coalition between EABA, COFALEC and IPIFF

- **Innovative proteins sources,** which may be used for **food** and/or **feed** purposes;
- Innovative solutions **inspired by nature**, encompassing products of both **vegetal** and **animal origin;**
- **Reliable solutions** for tackling **EU** and **global challenges** (e.g. '*reduce the (EU) dependency on critical feed materials*', in line with the F2F strategy);
- High **nutritional performance** and **functional benefits** (e.g. *help to address certain deficiencies in human diets, improving animal/zootechnical performance or boosting the immune system*);
- **Environmental credentials** and contribution to **circular supply chains** (e.g. *reducing the expansion of land, upcycling of underused resources*);
- '**Complementarity' – 'non competing'** with **conventional sources** (e.g. *tackling nutrient deficiencies*) as well as **between themselves** (proven beneficial effects even at low inclusion rates).

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THANK YOU

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