

Material for working stations:

Legal situation of insect-based food and feed

The European Legislation (EUR-Lex) regulates the legal framework for food and feed business operators, who produce and commercialize their products in the European Union (EU). Since the early 2002', the EU policy makers have adopted a package of legislative texts, which define general principles and standards of food and feed safety. These legislative texts are commonly known as the "General Food Law" (regulation Ne 178/2002)¹ and the "Hygiene Package"(e.g. Regulation No 852/2004 on the hygiene of foodstuffs and Regulation No 183/2005 laying down requirements for feed hygiene)² (IPIFF, 2020).

According to these legislative texts, producers of insects and products derived from them, are responsible to ensure the safety of the marketed products. This means they act under general obligations, such as the registration and/or approval of their activities before national competent authorities and to establish hygiene standards at all stages of the production cycle (IPIFF, 2020). However, there are different regulations towards the final purpose of Insects, which are listed below:

1) Insects as food

Entomophagy is a relative new phenomenon in Western countries, and therefore the legislative framework that provides necessary guidelines for safe and qualitative production is constantly being adapted. This leads to new challenges for public institutions like food agencies or custom- and health departments that are involved in the development of novel insect-based products.

Form a geographical point of view, there are several legal trends: The food agencies of Anglo-Saxon countries (UK, USA, Canada, New Zealand and Australia) for whom edible insects do not represent a novel food, have authorized import and sales. In the EU, insects are novel food and, in addition to the requirements of the "General Food Law" and the "Hygiene Package Regulation", the production and marketing of insects is regulated by the so-called "Novel Foods" legislation (Regulation No 2015/2283). This legislation applies to all categories of food that "were not used for human consumption to a significant degree" within the European Union before 15 May 1997. This is the case for most insects and, consequently they are subject to lengthy approval processes (IPIFF, 2020; Lähteenmäki-Uutela et al., 2017). Species included as of December 2018 are:

- Whole and ground *Alphitobius diaperinus* (lesser mealworm) larvae products
- Dried *Gryllobates sigillatus* (banded crickets)
- Whole and ground *Acheta domesticus* (house cricket)
- *Locusta migratoria* (migratory locust)
- Dried *Tenebrio molitor* (mealworms)

¹ Download the General Food Law Regulation -i.e. *Regulation (EC) No 178/2002*.

² Download the Regulations contained in the Hygiene Package- i.e. *Regulation No 852/2004* and *Regulation No 183/2005*

However, the legal acceptance for insects as food varies in the different EU-countries. For example in Italy the acceptance is low, Germany, on the other side, has become very acceptant since 2018 and, some insect products are now available in supermarkets and online (Reverberi, 2019).

2) Insects as feed

Producers of insect-based animal feed must be registered and/or approved as “feed business operators” by their national competent authorities. This procedure is required in order to assess that the producer appropriately manages the potential biological risks associated with such. The associated prescription is posed by Regulation (EC) 1831/2003, which defines safety and hygiene standards for animal feed products.

Insects and their derived products, excluding live insects that are intended to be used in animal feed are considered as “animal by-products” under EU Law. Animal by-products are animals and products from animals that are not intended for human consumption. This entails a series of obligations for producers of such; these obligations are defined in Regulation No 1069/2009³ and its implementing Regulation No 142/2012⁴, more often referred to as the “EU animal by-products legislation” (IPIFF, 2020).

For producers of processed insect proteins, such as insect meal, the approval is conditional on the fulfilment of a specific processing methods, which is described in the EU “animal by products legislation” (Regulation No 142/2011; annex IV, chapter III)

Furthermore, the applications to feed insect protein to certain animal species are limited: Animal-derived proteins are banned to feed ruminant (e.g. cows) and monogastric animals

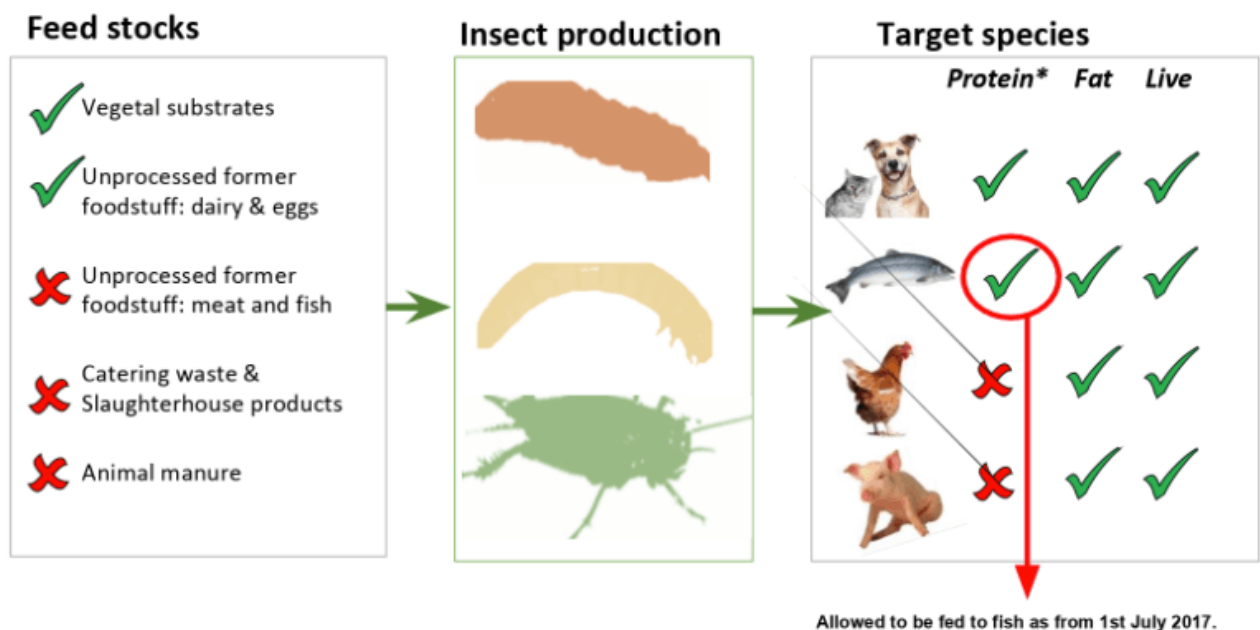


Figure 1. EU Regulatory possibility for insects' use in animal feed (IPIFF, 2020).

*Non-hydrolysed protein (if classified “hydrolysed”, all markets would be allowed)

³ Download *Regulation (EC) No 1069/2009* laying down health rules as regards animal by-products and derived products not intended for human consumption.

⁴ Download *Regulation (EU) No 142/2011* implementing Regulation (EC) No 1069/2009.

(e.g. pigs and poultry animals; **Figure 1**). This legislation is known as the EU “feed ban”, and was implemented after the Bovine Spongiform Ecephalopathy (BSE) outbreak in the 2000'. Consequently, insect derived proteins cannot be used in pig or poultry feed, whereas pets (e.g. dogs, cats, birds or reptiles) and fur animals (e.g. mink) may be fed with insect proteins. However, this ban does neither target whole insects nor to insect-derived fats (IPIFF, 2020).

References

1. International Platform of Insects for Food and Feed (IPIFF), retrieved 2020 October 13. EU Legislation; EU Novel Food Legislation. Available at: <https://ipiff.org/>
2. Lähteenmäki-Uutela, A.; Grmelová, N.; Hénault-Ethier, L.; Deschanps, M. H.; Vandenberg, G.W.; Zhao, A.; Zhang, Y.; Namane V. (2017): Insects as Food and Feed: Laws of the European Union, United States, Canada, Mexico, Australia, and China. In: European Food and Feed Law Review, vol. 12, no. 1, 2017, pp. 22–36.
3. Reverberi, M. (2019): Legal Status of Edible Insects in Western Countries (retrieved 2020 October 13). Available at: <https://www.entomofago.eu/en/2017/02/02/en-legal-status-of-edible-insects-in-western-countries/>