

Promoting Legislation Change to Help Feed the World



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What is PROteINSECT?



- A 3-year EU-funded project investigating the potential of insects as an alternative source of protein for **animal feed**.
- Focusing on the use of **fly larvae** in poultry, pig and fish feed.
- Evaluating the suitability of **organic waste materials**, including animal manure, as a substrate for rearing flies.
- Carrying out research into the following areas:
 - Sustainable insect production
 - Protein processing technologies
 - Quality and safety of insect protein
 - Life cycle analysis



Who is involved in PROteINSECT?



China, Ghana, Mali, Belgium,
United Kingdom, Austria, Switzerland

Mapping Exercise

- Current legislation is a major barrier to the use of insect protein in animal feed in Europe.
- PROteINSECT is engaging with policymakers in order to support the introduction of enabling legislation.
- Mapped current EU legislation to identify key challenges and gaps.
- Full report published last year, available at **www.proteinsect.eu**.





1. General Feed Safety



- Insect protein produced for animal feed classed as “feed material”
- The following legislation would apply:

EC Regulation 178/2002	General principles and requirements of food law
EC Regulation 183/2005	Requirements for feed hygiene
EC Directive 2002/32	Undesirable substances in animal feed
EC Regulation 767/2009	Placing on the market and use of feed

2. Insects as a feed material

- Listing in the catalogue of feed materials (**EU Regulation 68/2013**).

9.16.1	Terrestrial invertebrates ⁽¹⁾	Whole or parts of terrestrial invertebrates, in all their life stages, other than species pathogenic to humans and animals; with or without treatment such as fresh, frozen, dried.
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- Key legislation = TSE Regulation (**EC Regulation 999/2001**)
 - Prohibits the feeding of all farmed animals with processed animal protein (PAP).
 - Some exemptions e.g. fishmeal can be fed to non-ruminants.
 - Does not cover the feeding of live insects to animals.

- Recent developments :

- Since 1st June 2013, the feeding of PAP derived from non-ruminants to aquaculture animals has been reauthorised (**EU Regulation 56/2013**).
- Once valid diagnostic methods are available, likely that the use of non-ruminant PAP in poultry and pig feed will also be reauthorised.



- Possible future developments:

- EC has drafted an amendment to the TSE Regulation (**EC 999/2001**).
- Permits the feeding of non-ruminant farm animals with processed animal protein derived from insects.
- Conditions for the production and use of insect PAP analogous to those already in place for fishmeal.

3. Substrate used to rear insects

- Why focus on organic waste materials?
 - Flies are found naturally on organic waste and are highly efficient at converting waste to biomass.
 - Housefly larvae can reduce substrate mass by 60% over a 10 day period.
 - EU member states produce 1.4 billion tonnes of manure annually.
 - Flies can be used to significantly reduce waste volume resulting in environmental benefits.



- Key legislation = ABP Regulation (**EC Regulation 1069/2009**)
 - Insects produced for feed classed as “farmed animals”.
 - Only category 3 material can be used to feed farmed animals, manure is category 2 material and therefore not permitted.
 - Also list of materials prohibited from being placed on animal feed market (**EC Regulation 767/2009**):

Chapter 1: Prohibited materials

1. Faeces, urine and separated digestive tract content resulting from the emptying or removal of digestive tract, irrespective of any form of treatment or admixture.

- Possible future developments:
 - EC to refer the issue of approved substrates for insect rearing intended for animal feed to EFSA.



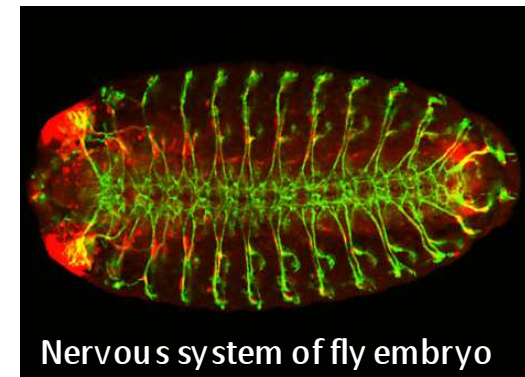
4. Other potential targets for legislation

- Environmental Issues
 - Possible that insect production could be more environmentally friendly than the production of traditional sources of animal feed protein.
 - Possibility of accidental release of insects, could affect biodiversity of local area.
 - The risk can be minimised by selecting only indigenous insect species.



- **Animal welfare issues**

- Since insects are invertebrates, animal welfare issues limited.
- Density of insects unlikely to be a problem since many insect species naturally live in crowded conditions.
- Little is currently known about the extent to which insects are capable of perceiving pain.
- Shown to exhibit nociceptive behaviour, but could be reflex actions.
- Suggested that insects be “granted the benefit of the doubt” and methods of killing that limit suffering should be used e.g. freezing or shredding (FAO, 2013).



Summary of areas that need to be addressed

1. Authorisation of insect PAP for use in non-ruminant feed.
2. Providing evidence of safety is demonstrated, legislation should be amended to permit the rearing of insects on animal manure.
3. Legislation addressing novel issues associated with the mass production of insects should be considered e.g. environmental and animal welfare issues.

What is PROteINSECT doing?

- Continued dialogue and information exchange with policymakers.
- Consultation with key stakeholder groups leading to the creation of a business case for the use of insects in animal feed.
- Development of a White Paper to be presented to the European Parliament.



Acknowledgements

- FAO. 2013. Edible insects: Future prospects for food and feed security.
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Engineering Competition

PROteINSECT is looking for engineering solutions for the most pressing bottlenecks.

An engineering competition for students will be launched in September 2014.

[More info at: www.proteinsect.eu/](http://www.proteinsect.eu/)



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Questions

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