

Interview with Dr Elaine Fitches, project coordinator of the PROteINSECT Project

14 February 2013 / By Silvia Curbelo Betancort

Very briefly, what is PROteINSECT about and why is it important?

The principal objective of PROteINSECT is to facilitate the use of insects as an alternative source of protein for incorporation into animal feed. The project seeks to examine the potential for rearing fly larvae on organic waste substrates as a means of both converting low-value wastes to high value protein and as a strategy for reducing waste volume. The quality and safety of insect protein produced from larvae reared in Europe, China, and Africa will be examined and animal feeding trials will be carried out. Life cycle analysis of rearing systems developed by the project partners will enable the design of optimized and sustainable production systems. Current regulations do not permit the use of insect protein in animal feed and hence focus is also placed on building a Pro-insect platform in Europe through communication with stakeholders and the general public.

What is the origin of the protein 'deficit' in Europe?

More than 80% of the protein required for livestock rearing in the EU is imported from non-EU countries. Population and income growth, increased urbanization, changes in lifestyle and food preferences have all contributed to a growing demand in the EU for protein to rear livestock. On a global level meat consumption has also increased dramatically in areas experiencing economic growth. For example, meat consumption has increased 20 fold over the past 40 years. This has all led to increasing pressures on land-use and adds to problems, such as market fluctuations and price rises, associated with securing an adequate protein supply for the EU.

Why, if using insects to feed animals is a potential solution, this is not considered legal currently?

As insects have not traditionally been considered as a component of animal feed or human consumption in the EU the necessary legislation is not in place. Current legislation is built around more traditional sources of protein, such as soya and fishmeal, for incorporation into animal feeds.

Why is the research consortium focusing the study in the fly larvae? Are there other insects that could be used with the same purpose?

We are focusing on fly larvae as they are able to develop rapidly on a range of organic wastes. For example, it takes housefly (*Musca domestica*) larvae only 4 -5 days to develop from eggs to mature larvae at 25°C. Other insects such as mealworm, crickets and locusts could also be used as a protein source for animal feed but take longer to develop, often require substrates already used as animal feedstuff and are generally less adaptable to large -scale rearing. We believe that flies are the best candidates for developing large scale, economically viable

production technologies.

Why is this study only applicable for monogastric animals?

We will be carrying out field trials incorporating insect protein into fish, chicken and poultry feed. The selection of livestock is based on the fact that all of these animals consume insects as a natural component of their diet. Hence nutritionally insects are most likely to be more suitable for incorporation into fish, chicken and pig diets.

What are the preliminary results of the project?

We are only 11 months into this project. Work so far has focused on developing new rearing systems for housefly and Black Soldier fly both in the EU and also in China, Mali and Ghana. A review of suitable processing technologies and of potential risks and opportunities for the use of insects has been conducted. We are just about to begin an analysis of the safety and nutritional quality of insect material produced by our partners. Communications with stakeholders, such as regulatory bodies, and other industry and research groups have been initiated and dissemination well under way – please see www.proteinsect@eu

Do you think your project will boost a change in EU policy if it proves that fly larvae are a sustainable source of protein for feeding fish, chicken and pigs?

We very much hope so! It is critical that we provide evidence of the safety and quality of insects to provide a strong scientific basis for changing policy.

Are there other projects related with insects as a source of protein for animal feed? And for human consumption?

There are a number of research projects, particularly in the Netherlands and France.

Thank you!

Further information:

To check the PROteINSECT website, click [here](#)