

IFF's 'Insect Revolution'



A two-day online conference focusing on the potential of insects

by Caitlin Gittins, Milling and Grain magazine

On 19-20 January 2022, the IFF hosted the online conference, 'Insect revolution! Healthy, sustainable, protein rich and delicious'.

This two-day conference boasted a proud total of nine hours of in-depth knowledge and understanding of the whole production process reviewed by leading experts in the field is highly recommended for both food and feed production professionals in 11 separate presentations.

This event was designed with food and feed nutritionists, owners and operators of food and feed manufacturing processes, companies and organizations looking to advance their knowledge and understanding of the potential of insects as alternative sustainable protein carriers in mind.

Day One - delivering to the industry

Day one of IFF's 'Insect Revolution' conference saw a range of interesting presentations related to current legislation, the growth performance of the black soldier fly, and plant concepts for larvae processing. Opened by Dr Werner Sitzmann, who explained the number of services IFF delivers to the industry, including their training courses, online courses, and workshops, held in different languages.

EU regulatory opportunities for unleashing the circulatory potential of farmed insects

Christophe Derrien, Secretary General of International Platform of Insects for Food and Feed (IPIFF) was first to speak, opening with his presentation related to regulation and how this can be utilised to facilitate the growth of the insect sector.

Being that the insect sector in the EU and Europe is relatively in its infancy, Mr Derrien explained, there are several challenges that need to be overcome, some of which are related to EU regulation. Insect production is incredibly beneficial, as it can solve global challenges including food waste, reliance on food imports and feeding a growing global population whilst limiting agricultural expansion.

Due to the possibilities opened up by utilising insect protein in animal feed, Mr Derrien gave an overview of current legislation and suggested that the next step in this would be to approve insect proteins in larger animals, such as ruminants.

There is progress being made in the insect sector, such as the twenty novel food applications having been submitted for approval by the EU Food Safety Authority (EFSA), with an additional two products (from Protix and Fair Insects) having been the green light on December 8, 2021.

Mr Derrien concluded his presentation by summarising that IPIFF have published a document on good hygiene practises within the sector with the aim of promoting best practises and informing third parties such as authorities, investors and clients.

They aim to develop a similar document for current actors within the sector and are involved in collaborative activities with companies producing other novel protein sources such as the algae and yeast sector.

Plant concepts for larvae processing

Arne Heuer, the Area Manager of Amandus Kahl, gave his presentation on potential plant concepts for larvae processing. Before the plant and equipment are designed, Mr Heuer explained, what was going in the plant needed to be identified, including the plant throughput, the type of insects being farmed, the composition, moisture content, and so on; so that the material can be sorted, handled or processed accordingly.

Mr Heuer went onto explain the process steps involved in larvae processing, including intake and cleaning, devitalising insects, separation and drying, and post-processing steps grinding, oil and fat polishing, and frass pelleting (which can be utilised in the fertiliser industry).

He explained these steps in greater detail from beginning to end, both in wet and dry processing of insects. This included looking at the devitalisation of insects, which uses water or steam to 'deactivate' them, so they are available for further processing, such as grinding insects into paste and drying them in wet processing, whereas in dry processing this involves feeding deactivated larvae into the dryer and then a screw pressure, to remove the oil from the larvae.

Mr Heuer concluded with the final step being on packaging and depending on product or customer requirements - whether this is for simple storage or needing 15 to 20kg for sale.

In the Q&A portion of the presentation, he explained that the decision to use dry processing or wet processing for larvae depended on the investment: for smaller plants dry processing is better suited, and for bigger plants, this is wet processing.

Day Two - Selling petfood with insects in Europe

Day two of the conference oversaw presentations on the role of insect protein within petfood both for its market potential and health benefits, the wet and dry processing of insects, as well as cooking of edible insects for human consumption in Myanmar.

Martin Sieland, the Managing Director of Terra Pura, a brand of Puroto's, delivered his presentation on the potential of the insect protein within petfood, as a growing market, and the challenges that it faced.

He gave a number of statistics on the petfood market in Germany in particular, illustrating that 45 percent of German households own at least one pet and in 2019, the petfood industry yielded a turnover of EUR€3.3 billion euros, both of which provides a number of opportunities for insect-based petfood.

While maintaining that insect-based petfood is still a small and developing market, Mr Sieland explained there are currently four or five actors within the sector offering dry and wet food: Bellfor, Green Petfood, Ofrieda, and Vet Concept.

However, challenges to insect-based petfood remain, in particular taking into account that there are two groups that need to be sold to: the owner buying the food, and the pet, eating the food.

He gave his own experiences with developing insect-based petfood and the challenges that needing addressing, including overcoming consumer challenges such as the ‘yak factor’ associating insects as not nutritious, and processing issues such as strong odours.

Mr Sieland concluded his presentation by asserting that there is potential for insect-based petfood within the industry and insects prove a viable ingredient due to their small space requirements, reduced water consumption and smaller carbon footprint.

However, the diversity of insect-based food has yet to be explored such as wet food, dry food and treats.

An insight in insect cooking

This presentation was jointly delivered by David Allan and Ei Phyu from Spectrum, giving both information on the insect sector within Myanmar specifically, and their work to combat associations of insects as inedible, unappetising food.

Spectrum’s work into the insect sector spans a number of topics, Mr Allan explained, but the topics covered specifically in the presentation was their work on the creation of a recipe book, insects as food promotion, and their work on social media. The insect sector is not necessarily positively associated, thanks

to what Mr Allan described as ‘the fear factor’, such as TV programmes portraying insects as disgusting to eat, rather than appetising food.

He went on to say that even in Myanmar, a nation that consumes insects as snacks, they are working towards promoting insect food as delicious, edible food. One of the ways in which Spectrum is promoting insects as delicious is through their own TV programme where two insects are cooked an episode, and are also posted in clips on their Facebook page.

Social media seemed particularly important in measuring the public’s response towards insects, as Mr Allan explained, looking in particular at the statistics on their Facebook page.

Another way involves utilising education material to shift children’s associations of insects - which Mr Allan said had been a positive response so far - and creating a recipe book in English, delivering insect-based meals.

In the Q&A portion of their presentation they were asked to give three ways of making insects part of the human food chain in Europe, which Mr Allan adapted into three reasons why they were presenting: to inform people insects are a delicious and sustainable food source, to encourage broader promotion of the acceptance of eating insects, and to combat the fear factor that negatively impacts on this acceptance.

Closing of the event

In the conclusion of the online event, Dr Sitzmann, who had opened the event, thanked everyone for their attendance and support, describing it as a ‘vivid, lively, interesting’ time, with a special mention to Dr Verena Bösch for organising the conference.