



Insects – Novel foods in the European Union

The interview with Dr Tilman Reinhardt from the University of Bayreuth is about insects, which are regulated as novel food in the European Union. Insects are a traditional food in many countries, but not in the European Union. In order to be able to place insects on the European market as food, they need to be authorised as novel foods. Some insects have been authorised for human consumption on the European market for some time, with further species being added at the beginning of 2023. Dr Tilman Reinhardt provides information on authorisations and general regulations on novel foods.

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KUestions is a video podcast format produced by the Akademie für Neue Medien (Bildungswerk) e.V. and the University of Bayreuth for the project Ernährungsradar. Experts are interviewed on various topics in the context of nutrition and report on the current state of research. The interview was conducted by Matthias Will from the Akademie für Neue Medien (Bildungswerk) e.V. and Helen Regina, a Master's student of Food Quality and Safety at the University of Bayreuth.

Recommended literature on the topic

Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (2023). Novel Food – Insekten als neuartige Lebensmittel: Was ist zu beachten?

https://www.bvl.bund.de/DE/Arbeitsbereiche/01_Lebensmittel/04_AntragstellerUnternehmen/13_FAQ/FAQ_NovelFood/FAQ_NovelFood_node.html

European Commission (2023). Approval of fourth insect as a Novel Food: Questions and answers. https://food.ec.europa.eu/safety/novel-food/authorisations/approval-insect-novel-food_en

Wüst J, Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit (2013). Insekten zum menschlichen Verzehr - neue EU-Zulassungen für Insekten in Lebensmitteln.

https://www.lgl.bayern.de/lebensmittel/technologien/funktionelle_lebensmittel/et_insekten_nahrungsmittel.htm

Vapnek J, Purnhagen K, Hillel B (2020): Regulatory and Legislative Framework for Novel Foods. Campus Kulmbach Legal Working Papers. https://doi.org/10.15495/EPub_UBT_00005178

English translation of the German interview transcript

Matthias Will: Dear audience, grasshopper bars, cricket flour or even beetle burgers: will such exotic foods be standard in Europe in the future? This is the question we want to explore in today's interview, and we would like to welcome you. The interview is part of the Ernährungsradar project, in which the University of Bayreuth and the Akademie für Neue Medien are working together to shed light on exciting nutritional topics. Our venue today is the historic pharmacy here in the beautiful Mönchshof and we are delighted to be guests here today. My name is Matthias Will, I work for the Akademie für Neue Medien in Kulmbach.

Helen Regina: I'm Helen Regina and I'm a Master's student at the University of Bayreuth. Today we're talking about novel foods: our interview guest is Dr Tilman Reinhardt. Dr Reinhardt, we are delighted to have you with us today.

Matthias Will: Dr Reinhardt, have you ever eaten insects?

Dr Reinhardt: Yes, actually. I worked in Vietnam for a few months a few years ago and there we often had different kinds of insects. And recently we've also often tried the new insects that have just been authorised at the Chair of Food Law. There's a colleague who is quite good at preparing them.

Helen Regina: How did it taste to you?

Dr Reinhardt: Well, I have to be honest, I often liked it in Vietnam, it wasn't anything special. I didn't perceive it as anything unusual or any more unusual than any other food that I didn't know and that was available there. When we've cooked it here recently, you've naturally focussed on it and then you think about it and ask yourself whether it really tastes that good. But of course you always need good recipes.

Matthias Will: Edible foods or edible insects are also making their way onto the German food market. Why don't you give us an overview? What is allowed to be consumed within Europe, within the EU?

Dr Reinhardt: So far there are 4 types of insects that are permitted. These are 2 types of mealworm, then the migratory locust and then the cricket. Each in different forms of preparation: Frozen, as a powder etc. And then there are 8 more, for which authorisation procedures are currently in progress and a risk assessment is still being carried out.

Helen Regina: In many countries outside Europe, insects have long been a common item on the menu. But in Germany, the consumption of insects is still far from common. Are there cultural reasons for this or is it also due to regulation?

Dr Reinhardt: Well, I think it's mainly for cultural reasons, of course, because it's not generally prohibited. You can get a authorisation and it's only recently that anyone has tried to get this authorisation. Nevertheless, it is of course the case that it is not possible without authorisation as a novel food and the market is limited accordingly. So you simply can't bring the products onto the market without this authorisation.

Helen Regina: What are the advantages of novel foods? Could they contribute to climate protection?

Dr Reinhardt: Yes, of course I'm just a lawyer, but the studies say that insects use comparatively little land, comparatively little water and comparatively little feed for the protein content they have. In this respect, there is great potential for the moment. Various health benefits of an insect-based diet have also been described. But the whole thing is of course always tricky when you look at the details. So then of course you really have to make a very precise comparison: Where do they come from? How are they produced? What network of utilisation do they fit into? Substitution effects, etc. So it is difficult to make a generalised statement and, above all, in order to make a contribution to climate protection, they must of course become established on a very large scale. Insects, because the question was also aimed at novel foods in general, are just one novel foodstuff that possibly promises advantages. There are also many other types of alternative proteins, for example based on mycelium, laboratory meat, i.e. cellular agriculture or plant-based. And you always have to look at the whole picture, and ask yourself which is ultimately the most promising.

Helen Regina: Do you believe that insects could become an essential part of the diet in this country in the medium term?

Dr Reinhardt: That's another question where I'm not one hundred per cent competent or specialised. So I think there are certainly reservations. It has not yet become established on the market to a great extent. At the same time, however, there is a great interest in investing in it. In addition to the novel food authorisations, there are a few other legal hurdles that may make it difficult when it comes to hygiene standards. For example, the question of what the insects are allowed to eat before we eat them. Or if they are used as animal feed before other animals eat them. At the moment, I think the potential is greater in the animal feed sector, i.e. when insects are used as animal feed. It remains to be seen what consumers will decide.

Matthias Will: Where can people actually try edible insects?

Dr Reinhardt: Well, you can buy the ones that are approved. They were also available here at Edeka. Not any more at the moment. There are products that contain insect flour. The colleague who prepares them always buys them from Amazon. I don't know if I should mention so many brand names here.

Matthias Will: A bit of advertising is allowed.

Dr Reinhardt: So in the supermarket and on the internet.

Matthias Will: Is the origin of edible insects actually regulated by law?

Dr Reinhardt: The origin, i.e. the question of where they come from, is not at first. That's a complicated question. If a product is authorised, then it is authorised, and in principle it can come from anywhere, i.e. it can be produced outside Europe or within Europe. As far as I know, the large industrial production plants are currently in the EU. There is a problem, a challenge, in that the authorisations that exist at the moment are subject to so-called data protection. This means that only the companies that have actually applied for authorisation have the data that proves their safety. And if another manufacturer tried to launch the same product on the market, they would first have to apply for authorisation themselves and possibly generate this data themselves. This is another point that may be restricting market development a little at the moment.

Helen Regina: What are the risks of consuming insects?

Dr Reinhardt: As far as I know, there are certain allergy risks, similar to crustaceans. However, it is not the case that the allergen labelling, for example, generally has to indicate that there is a potential allergy risk simply because it is an insect. Of course, if it contains an insect, it must also state that it contains insects. So that follows from the general regulations on ingredients.

Helen Regina: Are there certain labelling requirements, for example when insects that have been ground into powder are added to other traditional foods such as bread?

Dr Reinhardt: Well, as I just said, there is no general obligation to write "Caution insect!" on the label. Nevertheless, there is of course a general obligation to inform consumers truthfully about the ingredients. And it also has to be mentioned that it contains insect protein.

Helen Regina: What animal welfare regulations apply to the breeding of edible insects?

Dr Reinhardt: In this case, it is national law, i.e. German law, not European law. First of all, the general animal welfare regulations apply, i.e. above all the requirement not to inflict unnecessary suffering. As far as I know, there are still no special regulations for insects and this is still an open field of research. For a very long time, I believe, it was assumed that insects cannot feel any pain at all due to their nervous system. Now there are studies - of course, whenever there is greater interest, people take a closer look - that perhaps point in a different direction. But that is still an open field.

Matthias Will: We come to our final question. If you had to make a very specific proposal to the EU with regard to novel food, what would be most important to you?

Dr Reinhardt: Well, we are currently conducting a major study on the potential for reforms in the area of novel food. We have also conducted a large survey with almost 100 companies and other stakeholders in the sector. The low-hanging fruit are things like the authorisation processes themselves, better communication, advance communication from the European Food Safety Authority. What would also help a lot would be the possibility of carrying out tastings, even before authorisation. And these are also approaches that are already being taken in other countries. The thicker planks, which would be interesting with a view to the future and perhaps especially for insects, are actually collective authorisations. So not just each specific species, because it is not at all clear whether the risk is so different each time. And also this data protection, you could ask yourself, on the one hand it naturally creates an incentive for innovative companies because it gives them exclusivity on the market. But at the same time, it may also prevent others from continuing to work on these products for a certain period of time and making progress.

Matthias Will: Dr Reinhardt, thank you very much for the interview. Thank you very much for being with us today.

Dr Reinhardt: Thank you.