

## EIT Podcast\_ Mini\_ Nasekomo V3.mp3

**Matt Eastland** [00:00:06] Welcome to this bonus episode of the Food Fight podcast from EIT Food. In these episodes, we break down the food system for you, unpacking the ideas that create positive change. We'll be hearing from industry experts as they share new concepts and innovations, teaching you everything you need to know about a topic. Without further ado, let's get into this.

**Marc Bolard** [00:00:35] Hi, everyone. My name is Marc Bolard. I'm the co-founder of Nasekomo. Today I'm going to teach you everything about insects. People are using insects in agriculture now because we start to understand that they have a role to play in our future sustainable food production systems. We learn from our understanding on how ecosystems are organised and operate in balance with the environment and in a completely renewable way. Ecosystems have evolved during the past 1.5 billion years, and waste is a human creation that has only been happening for the vast last few centuries. Insect enabled us to requalify these wastes as valid inputs to new production systems and produce our food without depleting further and unsustainable resource. Now, Nasekomo is a biotechnology company founded in 2017. Our vision is one of a world network of business partners operating at insect farms to upcycle residual organic biomass into valuable insect based ingredients for food, feed and fertilisation. Thanks to the solution developed and provided by Nestle, our mission is to enable the geometric growth of this industry by developing and providing the biological, technological, digital and marketing solutions. Our industrial partners will need to operate their insect bio convert from farms. I come from animal production. I was an expert in dairy cattle genetics in a previous life. Let's see, which brought me to Vietnam few years ago, where I first really got in touch with the insect abilities to help the humans. Because in Asia, insects are used already as the food for humans sometimes, and also they are used for medical purposes medicine. I really got excited and interested by their potential as a solution for humans future. And that's where I got the idea of working with insects to have an impact. And in 2017, I got the opportunity with the colleagues of mine to kick start this new business. Natalie. We reviewed the market opportunities and we identified the feed market for pets and livestock as a real potential for growth, both from a financial perspective, but also to have an impact on our overall sustainability. Our technology is very unique in the Internet industry. It's a vertical farming technology in-house in a controlled environment, and we grow the insects in very large beds. So you have to imagine containers that can be up to 80 metres long, approximately two metre wide and something like 30 centimetre in height. And these big beds is where we install the insects and the feed they will grow on and we have the ability to stack up up to 12 such beds on top of each other in a massive structure that can be as high as ten metre. And all this technology is fully automated. So we have developed robots that take care of the insects while they are growing for their proper ventilation, for example. Or we need also to manage their temperature, their hydration and so on, so many different aspects so that we really have an efficient bio conversion process. Instead bring many benefits to our food systems because they are an integral part of all animals diets on this planet. Since they appear approximately 400 million years ago. This means that all these animals, including us humans, have evolved to thrive by eating insects. The science that is currently being done shows that all the main species for which we are starting to bring back insect products in their diets. Fish, pets like Belgian cats, chicken and pigs see significant improvement in their general health, starting with their gut health. Our insects are rich in essential nutrients, such as proteins and amino acids, but also interesting fibres named chitin, which form their shell, and that regulates our digestion. They also have essential oils similar to coconut oil that have anti-microbial, antifungal and antiviral properties. So all these benefits, they impact the consumers,

maybe one day, even humans. If we don't welcome insects in our food production, we remain in the current situation where we produce very significant amount of wasted biomass and these are wasted biomass. Most often they produce only captured methane that is sent in the atmosphere. And we know that methane has a very potent impact on climate change. Something like 33 more times than CO<sub>2</sub>. And so we keep having these negative impacts on our future and our planet thanks to insects. We process the right way. These biomass, We don't release the methane and we have a positive impact on the future of our environment and planet. If I can send one message to our consumer, it's time to open our mind about insects. I think history shows that we have a real misunderstanding of the potential of insects for humans future and the opportunity they bring to us in solving some of the biggest challenges that are facing humanity. First, food production. They can produce a huge amount of premium biomass for us to eat or for our animals to eat first and second, they can solve the waste generation. That currently is a significant issue in our food chain production. By processing these biomass produce little different, but we need to relax. Let's say the tense relationship between humans and insects that is in place in the Western world and maybe learn from other parts of the world who have already a historical very strongly relationship and a positive one working and in synergy.

**Matt Eastland** [00:09:13] Thank you all for listening in to this bonus episode, and we hope you learn something new. If you'd like to find out more, head over to the EIT Food website at EIT Food or EU. And please also join the conversation via the hashtag EIT Food Fights on our Twitter channel at EIT Food.