EIT Food Norbite Mini 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.

Nathalie Berezina [00:00:33] Hi, my name is Natalie Berezina and I am CEO at Norbite. And today I'm going to be telling you all about the opportunity with plastic breaks. So currently we have notes capitalisation of different types of plastic and permit materials. It's primarily due to their extraordinary versatility and efficiency for different types of uses, such as packaging, such as furniture, such as textiles. Actually, they're really helpful for many aspects of our lives, but at the end of life it becomes a problem because it cannot be degraded by simple solutions. But they have their own tasks. So that's why we have this huge problem with plastics in the oceans. We have this huge problem with plastic from landfills. And the only thing that they are doing with plastic, which cannot be recycled, is the incineration. And incineration is actually a very punishing process. As for every kilogram of plastic, we're liberated 2.5 kg of CO2. It's surprising, as it might appear from a first glance, but the solution for this global problem comes from a small, tiny little insect. The creative export. Norbite is a Swedish biotech company that aims on the transformation of lasting plastic waste streams into proteins and lipids by using an insect based biorefinery, which means that actually using a very natural solution. The insects to digest and transform plastic and promote materials into proteins and lipids. The insect. We are using the grit. Tobacco smoke has elaborated the very specific digestive solutions to digest beeswax. This is actually very similar on the chemical structure of Puerto Rico. They've common plastic and polymeric materials, and it's the combination of the whole ecosystem of its gut with the specific enzymes of the insect, which means it's very efficient to degrade. Big variety of different types of plastic and polymeric materials, which means that it can. They're just packaging textile furniture mixture. Copper maps was blasted by streams that every commits cannibalistic has been already taken out and the only destination was less mysterious, which have been the incineration. So in 2017, one group of scientists published an interesting article saying beds for having to remove one specific species of insects, the Groucho Marx moth. And they actually got lazy one evening. They led them into a plastic bag and he came back on the next morning, never holding the bag, and they're everywhere. So I wanted to understand how this was possible. And they made the first experiments. It showed that they are actually able to digest plastic materials and it's no buy. Our goal is to transform this curiosity of a laboratory into some actual business and to make more people to benefit of it. The main benefit from our technology is the transformation onto what is already a waste lost in waste streams of plastic. And we make much use the amounts that cannot be recycled by traditional recycling methods into something which can be reused so they can react to the economical value chain. So basically handling the problem of plastic waste and plastic pollution one hand side and we are providing nutritious ingredients on the other hand side, which means that to be basically also into two main problems that humanity is facing today hard enough plastic waste and providing enough healthy food for all. So currently we have laboratory proof of concept of our technology within the insects in the vertical farm, in the technology. So which means but we are using very little lab to convert a maximum of plastic materials into sustainable goods. And we are working to scale it up to a multi kilogram scale which will allow us to go far to the building of a demonstration unit in to 24. This is a small factory which will be able to transform up to 5000 tonnes of plastic waste area and after that we will be going on a dual go to market strategy. We have an actual industrial expansion of

building of commercial units, transform 60,000 tonnes of plastic waste per year and on the other hand, Santa will be going to give the lesson model which is allowing that to use our technology in specifically geographies available for us. Difficult to go in-person, verify and be effects. So which means that we are separated the main primary metabolites which are proteins and lipids and even the process before the insect is used as bio fertiliser, making this process a perfect example of circular economy. I think one of the most important lessons that we actually learned through our work with Norbite is but we need to remain humble when we are looking into the nature because of our many treasures, but just around us, what we don't know about and I think that many problems which we're currently facing could be solved with a smart and intelligent utilisation of natural resources that we have around us.

Matt Eastland [00:06:06] 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 dot EU and please also join the conversation via the hashtag EIT Food Fights on our Twitter channel at EIT Food.