

Food Fight - S1E9 - Is Sugar The New Tobacco.mp3

Matt Eastland [00:00:07] Hello, everyone, and welcome to The Food Fight podcast. Coming from EIT Food Venture Summit in Lisbon in Portugal.

Matt Eastland [00:00:18] Lovely. I'm Matt Eastland.

Annick Verween [00:00:20] And I'm Annick Verween and we both work for EIT Food, Europe's biggest innovation ecosystem that will make the food system more healthy, more sustainable and more trusted. So over the course of this series of podcasts, we've been inviting different guests from the food industry to talk about how we can tackle some of the world's biggest societal problems when it comes to food and fight for a better food future.

Matt Eastland [00:00:45] And I'm really delighted today that Annick here is actually standing in for my usual co-host Lukxmi, who's actually on maternity leave and actually just gave birth. So really, really lovely. Thank you. Thank you. Really, really lovely to have Annick here, so she's super well-connected to start-ups. As you all know. So today we're going to be tackling a quite provocative subject titled 'Is Sugar The New Tobacco?' So Annick, what do we mean by this?

Annick Verween [00:01:10] Well, we all know, even deep in our heart, overconsumption of sugar is bad for us right? But eating too many sweet things doesn't only rot your teeth. I have heard a nice list of scientific facts over overconsumption of sugar and high calorie foods is associated with lifestyle diseases such as obesity, the Black Syndrome and Type two Diabetes. World Health Organisation mentioned that child obesity is one of the most serious global public health challenges this century. Hundred and twenty four million children and adolescents overweight are obese today, one out of five. And that number will rise up to 250 million by 2030. And then another one, researchers showing that obesity now causes more cases of the first most common cancers than smoking. So it's a huge problem. We need to change our habits, that's for sure.

Matt Eastland [00:02:01] Absolutely. So is sugar the new tobacco? How serious is the threat and what can we do as a food industry to redress the balance? So it's time to introduce our lovely guests. I'm delighted to welcome on stage experts in three areas of the food industry to talk on this very subject. So our first guest is Karine Delafaye, who joins us from the world renowned food and beverage company Danone, where she's director of something called the Sugar and Sweetness Acceleration Project. Hi Karine.

Karine Delafaye [00:02:29] Hi.

Matt Eastland [00:02:33] Next up, we have Tom Simmons, founder and CEO of STEM, a company developing natural plant based sugar substitutes to help manufacturers reduce the sugar content of food products. Hello, Tom.

Tom Simmons [00:02:44] Hello.

Matt Eastland [00:02:46] And finally, we have Ilan Samish, founder and CEO of Amai Proteins. Amai Proteins is a tasty designer protein company where he focuses on proteins as a mainstream sugar substitute with the sweetest protein in the world, which I'm really looking forward to hearing more about. So hello, Ilan.

Annick Verween [00:03:06] So and just as a first way of introduction and kicking this off, a question to each of you. How did sugar become a point of focus for you and your work. And ladies first.

Karine Delafaye [00:03:16] Okay. I've always dreamed of being a doctor, but I can't see blood. So I turned to food because it's our first medicine. And I'm glad to be in a company who is really willing to drive healthier drinking and eating habits and recently joined this team to show that sugar. Yes, is attention, but they are very positive and innovative ways to unsettle sugar, not only food, sweetness, solutions, but also through reinventing the taste revolution, the taste to the un-sweet taste.

Annick Verween [00:03:47] Okay. Thank you. Tom. What is your way into the sugar world?

Tom Simmons [00:03:51] In a previous life, I was an academic. I was 10 years in academia, half of that in Edinburgh. The most recent half in Cambridge. And started the company in Cambridge after that. An insight that we work on to try and address this problem is not that sugar, excessive sugar consumption per say is bad, but the consumption of the wrong type of sugars is the real issue. So we don't help address the problem by developing a brand new ingredient, never before seen by mankind. Instead, what we do is we go to the most abundant source of sugar in nature, which is actually in dietary fibre. So I spend my academic career working on dietary fibre plant carbohydrates. Most people don't know that dietary fibres actually composed almost entirely of sugars. So what we do is we take dietary fibre. We fragmented down in a similar way to how bacteria in your guts fragment down when they feed on fibre. And we find that we can take fibre and make it behave like sugar in food and yet still behave like fibre in your body. So we can make cookies, cakes, ice creams, etc., which tastes like they have cane sugar in them. But instead of causing sugar spikes, they actually attenuate blood sugar levels like fibre does instead of causing excess cravings after eating them. They actually fill you up like fibre does. So we do this by taking fibre based sugars instead of conventional cane sugar, which, as I say, is the most abundant source of sugar in the world actually.

Annick Verween [00:05:15] Okay. Thanks. Ilan, how this sugar became so important from you?

Ilan Samish [00:05:19] I became obsessed with sugar as a child. My twin sister always ate less than me and she was chubby, I was skinny as a kid, no longer skinny. But I felt bad if I ate something with sugar and I do love sugar. And then later on, when I put out what became world's leading book in computational protein design, I thought despite the fact they have a comfortable academic career, I have here a method which, together with biotechnology and food technology, can cure the food we eat. And from my point of view, being in academia, working on another publication is very nice. But if I have the possibility to cure the food we eat rather than the diseases that come out of it. This is a much bigger mission. So I left academia and I established and founded Amai Proteins. Just a small legal disclosure before continuing. We do have fee bearing agreements with Danone, PepsiCo, Ocean Spray and some other companies. So just to put that in place, in Amai we take proteins and we fit them to the mass food market, including sensory, profile cost and stability, stability in the broad sense as to P.H. temperature or acidity and so on. And we are making whether it is soda or yoghurt or ketchups that you're all welcome to taste in Amai booth or Amai sweet in Japanese.

Matt Eastland [00:06:56] Fantastic. Thanks, Ilan. So just to open the question for this whole debate then. So why have we become so addicted to sugar? How is sugar become so popular over the years?

Karine Delafaye [00:07:07] Obviously the sweet taste is an innate taste, but I think also as a challenge point is that I think there is an opportunity also to solve the issue, reinventing the taste, which is not only a sweet taste, then reinventing the pleasure, going away and melting away from this. What you called addiction.

Matt Eastland [00:07:27] And Tom, do you agree? Are we addicted or is it not actually addiction? It's just something we've gotten used to over the years.

Tom Simmons [00:07:33] Innately, humans just like the taste of sugar. One of the reasons why sugar is really so pervasive in the in the diet is because it's so cheap nowadays. And so it just forms a whole range of different functions. And you'll find it in places really you would never have expected, even for promoting sweetness. So a big challenge to deal with is how to find something to take. Sugars place, when it's so cheap and so abundantly available.

Matt Eastland [00:07:57] Ilan I see you nodding your head there. Do you agree with Tom?

Ilan Samish [00:08:00] Oh, yes, I agree with Tom and I will go one step further because sugar began four thousand B.C. as pig food in the far east, but only in fifteen A.D, we began to use it all over. And our sugar is a sign of energy and a sign of something good, unlike bitter, or receptors which are a sign of something toxic. And we have twenty five receptors for bitter, but only one for sweet taste. And this sweet taste actually activates in the prefrontal cortex of the brain. Some of the same dopamine receptors which are activated in other pleasurable activities that we do. So there was definitely a component of addiction in sugar.

Matt Eastland [00:08:48] Okay, but it's not for everybody right? So, I mean, even you look at the audience here, about thirty percent, forty percent of people said they don't have a sweet tooth. So is it something we learn as a child to love sugar and then we we change out of that?

Karine Delafaye [00:09:01] It's really as you said, there is an innate eating preference for sweet taste. But what we observe also is that in the early years of this, these preferences evolving. And it's really influenced by categories that we expose the child to and I think it was via, a mansion from a vegetable exposition this morning. So, yes, we have an innate preference but it evolves and it is really influenced by the social context and from the education. So I think it put the question of the early healthy taste education.

Matt Eastland [00:09:35] Wonderful. Thank you.

Annick Verween [00:09:36] Ok so Ilan you mentioned the words wrong sugars or bad sugars. Do you think on a general level that the public is well enough educated to spot sugars in their food? Because if you look at the labels, you take every project. It starts with a simple ones right? Brown sugar, palm sugar, honey. Everybody knows them. Then you have terms like fructose, sucrose, maltose already getting a bit more complicated. And then you end up with hydrolysed starch, coconut blossom nectar, barley malt syrup, which are even much harder to spot from a consumer perspective. So are people well equipped

enough, educated enough to know what's good, what's bad and at what quantity? Ilan, do you have an opinion on that?

Ilan Samish [00:10:20] Here we have a evolving change because sugar has in labelling sixty one different names and the public is not sufficiently educated about it. On one hand and on the other hand, only recently there is a consensus of the scientific community following mega studies about the fact that sugar is public enemy number one when it comes to health. Now it's the FDA in two thousand and fourteen asked to change the labelling in order to better educate the public. And now and January first, twenty twenty, for the first time, there will be mandatory labelling to show the amount of sugar per serving size and the relative, recommended daily dose, which is around nine teaspoons for men and six for women, in the twelve ounce Cola has more than that. So there is a change in the regulator when the market is not perfect is putting additional regulations to do that. Today you have fourteen countries which put tax over sugar, which again is a sign of coming with an intervention from the government, from the regulator to help us have a better food. And from the other point, Credit Suisse in twenty thirteen, they put out a report saying that in order to solve the world health crisis, the best way is to do sugar tax and other measurements coming from the regulators. So that is a big change. And we expect to have less sugar consumed by the public in the upcoming years.

Matt Eastland [00:12:05] Karine, do you think that from the Danone perspective, are you equipping your consumers with all the right information so they can make these sort of better choices?

Karine Delafaye [00:12:14] Enabling the consumer to make healthier choices without obsession. We are really committed to over labelling systems which allow the consumer to really understand what is labelled and what it has in its food. But I would like to come back to a point on the diversity of sugars. Indeed there are values, technology reasons to use some of these sugars. And also there are some different consumer tensions and needs, which makes us choose different sugars and sweetening solutions, let's say. So I think also one way to answer that tension and to enable people to choose healthier sugar reduced product is really to choose carefully the type of sweetening systems that we use being more natural, depending on the acceptance being artificial in some cases. So it's really a question of offering a part of your solution, healthier sugar, reduced solutions, but also un-sweet solutions.

Matt Eastland [00:13:08] Yeah, that's a really interesting point. You mentioned like healthier alternatives here. And Tom at Stem, you're focussing on natural plant based sugar alternatives. So what are they? And, you know, are they better for our health?

Tom Simmons [00:13:20] Let me let me first say something about the question you asked Ilan that, like it says, it's certainly true that consumers broadly do not understand exactly what's going on, but it's not restricted to sugar. This is pervasive across all food. And partly the solution to that is education. But partly its a inherently hard problem, it is one of the most complex sciences out there. And it needs to be described to consumers, not only in a way that the layperson on the street will understand, but also the layperson when they are about to make a purchasing decision in a checkout, when emotions ride over the logic. So it's super hard trying to find an easy way to describe our problem. So one of the weird things that people don't understand is sugar. And another they don't understand is fibre and actually back when fibre was first being defined, this was this was an issue people observed that the Western world were suffering from a whole range of non-communicable diseases. The things that were back in the 60s, still these things are still the main killers to

us now, heart disease, cancers, etc, unlike pathogenic diseases, which which we used to all die from. And the debate at the time was whether excess sugar or absence of fibre was the cause for that. So what we decide, what we do is and the long story short is actually it seems to be the case, the absence of fibre is really the main issue behind sugar. Hence why good dietary guidance is not to stop eating fruits simply because it has sugar in it. You want to eat fruit as fibre as well of the vitamins. Yeah, our solution is to is to use fibre as the most abundant source of sugar in the natural world. There's far more sugar in dietary fibre out there in nature than there is in squeezed juices from a from a cane plant it a really trivial source of sugar, really. So we take sugar from there. This stuff that your body, if you're healthy, should already be consuming anyway. But we present it to you in a way that it can perform like sugar in a few products. So performs like a fibre in your body. Yes.

Annick Verween [00:15:17] Ilan, you do a totally different right? You're focussing on protein different than the fibre to provide sweetness. So it also has a different fraction. So can you tell me a little bit more about Amai Protein and what you call the sweetest protein in the world?

Ilan Samish [00:15:31] So in Amai we decided to look into nature and ask what is the solution that nature is giving us? And in the jungle, the mighty jungle, the sugary apples from the Garden of Eden is no longer good enough because everyone has apples. So you have fruits from West Africa to Malaysia and China along the equatorial belt. You have fruits which are sweetened by sweet proteins. They adhere to the sweet receptors just like sugar, but then are digested just like a protein with no remains other than essential amino acids that go into our body. Now, if this is so good, how come we don't use them? We actually do use in the market, though there is one protein. It has an E number and you can buy it, but there is a very high cost and scarcity of it. So we looked at the issues, the challenges of these proteins, which is cost and supply stability, P.H, temperature of acidity and the sensorial profile. And by applying computational protein design coupled to production by fermentation, by precision fermentation, by yeast, just like you brew beer we make proteins and we made a protein that is stable for pasteurisation, which has a very good sensory profile as a people in Danone and other places claim. And that you can put in very small amounts and because we are ten thousand times sweeter than sugar, one teaspoon of our proteins replaces fifty kilograms of sugar. Consequently, we are ninety percent cheaper than sugar in sweetness units.

Matt Eastland [00:17:16] Amazing. Okay. And Karine, so you've heard from the two guys on stage and we're talking about alternatives based on fibre alternatives, based on proteins. From Danone, I know, are you actually taking these sorts of alternatives and are you using them, are you accelerating this?

Karine Delafaye [00:17:33] Indeed. Our obsession is really to bring healthy food. So we are already open and searching the different solutions which are emerging. That's the reason why we are partners of the EIT Food. We are collaborating with Amai. So yes, we are here to accelerate these initiatives, bringing also user perspective, because I think we need to focus on the fact that when people are looking for sugar, they are looking for sweetness, they are looking for pleasure in food. So again, we need technical solutions, but we need also to use the right technical solution depending on the right usage. Not everybody likes the same level of sweetness, you said it. We have very different phenotypes and people want different origin for their sweetness. Some people don't want sweetness. So, yeah, we are very focussed on having a portfolio of solution, all healthier sugar, reduced sweet. And really we are keen on accelerating all these technical solutions and the solutions depends on the rhetoric's, not the same solution for beverage than dairy

products. Some of them are not applicable and soluable solutions. So yeah, our role is to accelerate the portfolio of solutions.

Tom Simmons [00:18:41] One nuance to this we haven't said that is not only do we have separate ways to solve the sugar problem. It actually leads to a different market of opportunities. So the way I pitch what's so great about STEM? Why STEM is the best company ever, is that is that we've described the biggest problem in the food industry is not just broadly sugar reduction or replacement per say as a whole level. The biggest unsolved problem in the food industry is how to reduce sugar in food products as opposed to drink products. It's a very distinct functionality that needed to replace sugar in these different spaces. And sugar free drinks have been on supermarket shelves in Europe and America for thirty years now. And there's been lots of iterations on trying to find ways to improve these over the last thirty years. But to some significant extent, the problem was addressed thirty years ago. There were successful sugar free drinks on the market. The same thing is not the case in any other aisle. If you walk down a supermarket, cookies, cakes, biscuits, rockets, doughnuts, pastries, ice creams, anything where there's a solid component as opposed to a liquor component, conventional sweetness can't function because sugar makes a cake taste sweet, but it also makes it look like a cake and feel like a cake. It has physical properties which dictate the way these food products are formed. And really, if you want to replace those sort of applications, you actually need a plant based sugar probably to get there. That's where we think we really slot in. And actually that's where the majority of British people for sure, i'm sure it applies to most of the Western world, consume more of that added sugar in in these sort of food products than in beverages anyway.

Ilan Samish [00:20:15] Tom and Karine just to relate to what both of you said. So Tom, obviously we need more than one solution. And while we give something which is extremely sweet, hyper-sweet, we need also to solve the bulking agent, whether it is was a STEM solution or through a DouxMatok solution another Israeli company which is here. And today The biggest daily company in the U.S. filed for bankruptcy. The world is undergoing an earthquake. And if you want to stay in this world, you have to adapt. And in the case of Danone, we didn't have to go to them. But their scout came to us and asked us, can we work with you? How can we work with you? Give us some samples. We want to evaluate it. We we know you're a Start-Up. We will pay you a little bit of money and we will evaluate it and give you a report. And if it is good, this may help you get more funding in order to go without any exclusivity or something like that. And I think that companies that embrace open innovation and the partnerships between the hundred thousand employee company and what we were then three people company, now we are much bigger. Nine people and in a year will be twenty. But I think that EIT Food is exactly about that, about the partnership between the small and the big companies.

Matt Eastland [00:21:39] And do you think that I mean, listening to you talk, I'm wondering do you think the food industry is doing enough to reduce, like, sugar consumption generally?

Ilan Samish [00:21:47] It's never enough. I'm an entrepreneur, some people say we have amazing achievements. But for me, it's never enough because we always want to go more. I think that things are changing, maybe not in a fast enough pace. For example, the FDA regulations on sugar labelling, were offered five years ago, it took five years to implement them. But there is a big change. And right now you have to understand that in the past there was a diet of low calorie, low fat, and indeed the population has cut from forty percent fat calories to thirty percent, but only recently following mainly the pure study

in and other studies, pure study one hundred and thirty five thousand people, seven years. Twenty seventeen came out with saying that sugar is the number one health threat for humanity and the regulators and the food companies are now embracing this. Today, eight percent of the new products have sugar reduction claims. Today, you have sugar tax. And today from the other side, according to a report, eighty percent of the people look at the labelling, in the past people did not look on the labelling. So there is a change. Is it fast enough or not? That's a question you can always tackle. But the understanding that sugar must go down is slowly infiltrating into all. And you can see the tobacco. I mean, we are here when the food fight about tobacco. Tobacco according to the Department of Human Health and Services in the U.S. government in nineteen seventy six, twenty nine percent of all twelfth graders had a daily cigarette. Today, this number has went down to three point six percent. Actually, data from two years ago, but it took quite a few years to understand how bad tobacco is and to go down with it, including some companies who tried to continue with it, some not. The same goes here. Some food companies a few years ago said that calories a calorie, today we understand there are good calories or our bad calories, and sugar are not good calories. So it's not only the calorie, it's also the spike of sugar. It is also the insulin. It is also the effect on the microbiome, liver and kidneys. So I think there was a change. Not fast enough.

Matt Eastland [00:24:16] Okay, great. So, I mean, you're talking there about it's taken such a long time or you think it's going to take a long time to get there. So a question that we often ask on The Food Fight Podcast is, you know, if we could rip up the food industry and start again and designed like this utopian food system, what would be like the thing or the first thing that you do to solve some of sugar's biggest problems? I mean, like, would you even include sugar from the outset? Like, Tom, what do you think? It's a monster question.

Tom Simmons [00:24:45] Well, of course, we'd all be using STEM first.

Matt Eastland [00:24:47] Well obviously.

Tom Simmons [00:24:48] First and foremost. The strange thing about what we do right now is in our space, we developing plants sugars with the aim of replacing cane sugar. And we're trying to really mimic things that people recognise as food products out there. So maybe we might try to do something without cane sugar in the first place in the world we live in, we really have to make things that people recognise as things that they conventionally cakes, cookies, biscuits. We can't come out with a strange looking thing that doesn't know, no one knows what it is. Maybe we do that. Possibly.

Matt Eastland [00:25:18] Okay, great. Karine, What do you think? What would what would you do if you could start again?

Karine Delafaye [00:25:22] What I'm excited about in this situation is that it's an opportunity to reinvent really the food culture, to restart a culinary culture. What if we can't have sugar? Well, let's cook differently. Let's eat differently. It's much more exciting to say, ok let's reinvents sensory experience, which are so exciting that people won't even think that there is no sugar and no sweetness in it. And that's really exciting. That's innovation. And I think this is what we are speaking today.

Matt Eastland [00:25:52] Right. And Ilan do you agree?

Ilan Samish [00:25:54] Fully agree. I think that our body does not need sugar. We know how to produce sugar. We need nine essential amino acids to fatty acids, which are essential. We don't need sugar, but we enjoy sugar. And sugar is a cheap substance. Consequently, sugar came more and more as it became more and more cheap. And high fructose corn syrup, which was introduced by PepsiCo and Coca-Cola in nineteen eighty four, is even cheaper and even less healthy. But we can reverse this. In Israel, by the way, when one of the foreign companies without mentioning names came with a yoghurt was much higher sugar. People began to move to it because it was more enjoyable. The other company that was beforehand in Israel with yoghurt, had to put up an increased amount of sugar in order to stay in the competition. So I think with this situation, education has never solved a problem of substance, of abuse. You need the regulators, you need education, you need everything together. And you need the understanding that the market is shrinking and today, and this is a known secret of the industry, the beverage market which is accountable for forty seven percent of the added sugar is actually shrinking. People drink less beverages. People are moving toward SodaStream, which is known for sustainability and less sugar was bought by PepsiCo for three point two billion dollars because it has a better a healthy beverage. So I think we are now in the process. On one hand, you see some companies that will go bankrupt. And the other, you will see places that will adapt to the new situation. It begins always with the higher socio economic folks and will slowly infiltrate to the lower socio economic part, which needs it the most.

Matt Eastland [00:27:57] Amazing.

Annick Verween [00:27:57] Thank you Ilan. So I think with this summary of an utopian world without sugar or with less sugar, maybe it's time to open up questions to the audience. Are there any questions?

Audience [00:28:11] *Inaudible*

Matt Eastland [00:28:11] Ok so the question is, you know, do you think the sugar tax is working and are there any ways to make it better? Anyone? Who wants to take this?

Ilan Samish [00:28:27] There was no question sugar tax is working, it's working in three different ways. Number one, the lower socio economic population, because the price is going up, is buying less. Number two there is a buzz, there is a PR that sugar is not good for you. Consequently, it is being taxed. And number three, there is a massive reformulation of a lot of products to go below the sugar tax. This has happened. Now, I mean, Chile, Israel. Israel, within two years, fifteen hundred products immediately got to reformulated because they didn't want not even a tax, but just a red labelling. And if you had things where you could do some reformulation and go below this red labelling companies did it. So it's a mutual synergistic effect of education, PR and cost and reformulation of the industry. And that's the only way to fight sugar.

Matt Eastland [00:29:28] And Karein do you agree?

Karine Delafaye [00:29:29] Well, what I would say is I think it's important to anticipate. I think our roll is to take commitments before we come to the tax level, to the tax situation. And that's a reason why we took commitments on nutritional targets, on sugar from two thousand and five. So I think really the point is anticipating our role in the industry, it is to be ahead of this kind of solution, let's say. And I think that will be the most favourable situation for the food industry and for our user and also for the wallets of the consumer. So that would be a much more positive approach, I would say. And we are committed to this

and we will review and we still review our coming and our guidelines and additional guidelines and we adapt them to always go further. And as you said, we need to go further each time and to do even more.

Matt Eastland [00:30:17] Thank you guys.

Annick Verween [00:30:18] Thank you. I think we're almost there, right?

Matt Eastland [00:30:20] We're almost out of time.

Annick Verween [00:30:21] One final question and I will look at you first Karine. What do you think are the most exciting and important innovations that are happening at the moment in the future of food and sweetness? I first ask you, because they might just tell their own company right?

Matt Eastland [00:30:37] ahahaha.

Karine Delafaye [00:30:37] How we share an experience. I mean, I was last Friday with some chefs, culinary chef. Now in a kitchen. And we asked them, guys, teach us, help us to develop a sweet dairy pleasure product. And what we tasted were just amazing. So, yeah, I think the future is the creativity in the culinary experience and creativity for taste. That's the future, I think, of a solution.

Matt Eastland [00:31:04] Amazing. And Tom, other than the amazing-ness of STEM.

Tom Simmons [00:31:07] Other than STEM.

Matt Eastland [00:31:07] What what else are you really excited about in this space?

Tom Simmons [00:31:11] Ilans doing something very interesting. One of the nice things about our situation right now is there's a whole load of stuff happening in food. But actually in some of the specific problems we're addressing, this is not a huge amount of stuff happening, especially on this sort of bulking sugar thing. There's almost nothing around this that there is a there's a few interesting things happening on the on the sweetening side of which Ilans doing some great work.

Matt Eastland [00:31:32] So, everyone, we're completely out of time. So I just wanted to say, Karine Delafaye, Ilan Samish and Tom Simmons, absolute pleasure to have you on the panel today. Where can people listening find out more about what you do?

Tom Simmons [00:31:46] Our website is stemsugar.com. That's probably the best place.

Matt Eastland [00:31:50] Okay, Karine?

Karine Delafaye [00:31:50] Obviously on the Danone website, we've got commitments and we have our open innovation team. If we are any Start-Up willing to cooperate even more on this sweetening solution with us.

Matt Eastland [00:32:00] Thank you Ilan?

Ilan Samish [00:32:02] Amai protein's has a website of course, some of the newer things are still not there because they're under the radar. But you have a lot of press and the

amount of press represents how people are fascinated and want new solutions that will give you a healthy sweetness, which is what we are trying to do.

Matt Eastland [00:32:23] Excellent.

Annick Verween [00:32:23] Excellent thanks Ilan. So before we really wrap up, Matt, what have you learnt today? Sugar to new tobacco?

Matt Eastland [00:32:28] Well, for me, I think it's obviously a really complex issue. It sounds to me like maybe sugar's got a little bit of a bad reputation and it's encouraging to see some of the amazing things that people across the food industry are doing to, you know, like alternatives. So that's been like a big takeaway for me. I think I'm positive.

Annick Verween [00:32:44] Good, I'm positive as well I think, it's great that to have companies like STEM and Amai, who take challenges turn them into opportunities. I also think it wasn't mentioned today, but it raised lots of interest also from investors. So there's definitely things happening there. So I'm an optimist here as well.

Matt Eastland [00:33:00] Great stuff. So all that's left to say everyone is thanks for joining us for The Food Fight. Please do hit subscribe and let us know what you think of the conversation so you can find out more about EIT Food and our programmes and activities at eitfood.eu or hit us up on social media using the hashtag EIT Food Fight. So from me, Matt Eastland.

Annick Verween [00:33:22] And Annick Verween.

Matt Eastland [00:33:23] Thanks for listening.

Annick Verween [00:33:24] Thank you.