EIT Food Fight Podcast - Episode 1B - 3FBio.mp3

Lukxmi Balathasan [00:00:06] Welcome to this bonus episode of the Food Fight podcast from EIT food.

Matt Eastland [00:00:12] In these episodes we want to shine the light on the new projects and agri food startups and hear about their efforts to fight for a better food future.

Lukxmi Balathasan [00:00:22] This week, we will be hearing from Jim Laird, who will be talking about his startup 3F Bio.

Jim Laird [00:00:32] Hi, I'm Jim Laird. I'm the CEO of 3F Bio. We're fighting for the future of food because it is one of the biggest and most important challenges of our time. Global experts agree we cannot feed the planet using current technologies. Quite simply, we cannot overly rely on the animal as our biggest source of protein. And we have to find alternative ways, such as technology. And from our point of view, biotechnology, is this key enabler in what will be a solution for the future.

[00:01:02] Protein is an essential part of a healthy diet and essential in terms of growing the body and making muscle. As diets have changed, the level of protein intake has grown massively. Which means there's a gross disparity in the level of protein in different areas. In Western diets the advent of intensive animal farming has reduced the cost of protein, whereas in some markets there is still a genuine protein deficiency. Protein needs to be sustainable both environmentally and economically. And it also needs the potential for scale to be able to make a real difference.

[00:01:41] Most of the plant based options, such as pea, wheat and soy can achieve some of the environmental aims, such as CO2 emissions and lower land and water use. But for sustainable protein to be capable of meeting the needs of a growing population, we believe the definition of sustainability needs to extend to being economically sustainable by being affordable for all and needs to have the scale potential to make tens of millions of tonnes, so that it can meet the growth in consumer demand. We use the natural sugars that you find in grains such as wheat and maize, and we use that as a feedstock to feed a large scale natural fermentation process, which creates something called MICA protein, a high quality protein that is rich in both fibre and protein. In some ways it's a bit like the dairy industry and making yogurt. In yogurt the bacteria converts the milk to yogurt and that processed fungi converts those sugars and those grains into high quality protein. There's many reasons why consumers will benefit by switching to alternative proteins and that includes nutrition, health, ethical reasons. But at its very simplest we think ABUNDA MICA protein and its rich high quality protein and fibre create delicious products and the everyday favourites our consumers love, that enable them to change what they eat and maybe not the way that they eat.

[00:03:06] Crude protein in a large scale fermenter is many times more efficient than other farming processes. We are more than 10 times more efficient in land use, water use and significantly less carbon emissions. In addition, MICA protein enables consumers to reduce their environmental impact. For every kilogram of MICA protein we make, we reduce carbon emissions by about 5 kg. And that means for my quarter pounder I'm reducing two miles of road transport for every one I eat. ABUNDA MICA protein is extremely versatile and we've shown some great products internally making delicious burgers, sausages, some lovely chicken style products. The functionality of ABUNDA comes from its clean taste and it's rich in protein and fibre. We see wider applications and

are working with the EIT partners, looking at a fish-style product and also looking at beverages and snacks. We're also working with a very innovative and pioneering French company who are looking at making bio plastics out of MICA protein. Therefore, we impact the planet in both the food we eat and also the packaging that wraps it.

[00:04:08] It's very simple, that if we don't make this change to the agri food industry, there is no obvious path as to how we genuinely make an impact on reducing the negative impact of climate change. We have an urgent need for technology solutions to some of the big challenges of our time, and this includes sustainable protein and also food security. In my view, the challenge ahead is in ensuring a supply chain that can keep pace with demand, that's not only competitive to low cost meat, but is also disruptive to initiate and accelerate change.

[00:04:40] ABUNDA is a natural combination of fibre and protein which gives it a natural meat like texture. In a similar way, as for white meat and fish, it is a clean, a fairly neutral taste, which means there's no need to mask any after taste. And then the cook or the chef can add flavour in the way that they want. In terms of nutrition, ABUNDA contains all of the essential amino acids, making it equivalent to meat, and the nutritional footprint is superior to most of the other alternative protein sources. I think there is a next generation of farming and one that uses resources more efficiently. We share the same passion and rigour as conventional farmers in ensuring that we have a high quality, consistent product. And with our B2B business model, we see ABUNDA as an additional crop or an additional ingredient choice that can be used to make great tasting food.

[00:05:32] We're currently at pilot scale and are increasingly working with potential customers to both demonstrate the product and application and secure offtake commitment for demand from the first production plant. Our focus on timescales to reach a commercial stage in 2021, and we've recently announced a project to build the first of its kind integrated facility where we work alongside a consortium of amazing partners who represent all aspects of the value chain. The project has significant support from the EU's 'BBIJU', the bio based industries to whom we are hugely grateful for their support. We aim to be at commercial scale in 2021 and we look forward to all sorts of collaborative partnerships in that timescale.

[00:06:17] We hope and believe the future of food can be sustainable and could feed growing populations without negative environmental impact. If I could send one message to the rest of the food industry it's that we have to work together. For us, collaboration is essential and we welcome the opportunity to work with food ingredients suppliers or manufacturers of end products to make the sort of products, plant based products that consumers enjoy and consumers love.

Lukxmi Balathasan [00:06:49] Thanks for listening to this bonus episode of the Food Fight podcast.

Matt Eastland [00:06:54] To find out more and to learn how you can get involved in the fight for a better food future, head over to eitfood.eu/podcast.