EIT UN SUMMIT WINNER PT1_ V3.mp3

Matt Eastland [00:00:06] Welcome to The Food Fight podcast from EIT Food, exploring the greatest challenges facing the food system and the innovations and entrepreneurs looking to solve them. Hi, everybody, I'm Matt Eastland. And in today's special episode, I'm joined by my colleague Barbaros Corekoglu, who's the Strategic Relations Manager here at EIT Food to celebrate a rising generation of small business entrepreneurs and specifically the winners of the Good Food for All competition that was held in conjunction with the UN Food Systems Summit. Hi, Barbaros. Many thanks for joining us today.

Barbaros Corekoglu [00:00:39] Thanks Matt. I'm really excited and I'm looking forward to this episode.

Matt Eastland [00:00:43] Thanks very much, Barbaros. So the podcast today is the first of two special episodes where we're going to be hearing stories of these award winning start ups who have all been selected for their merits in transforming food systems for a better tomorrow. And Barbaros, this has been a project which is very close to your heart I know. So can you tell us just a little bit about the UN Food System Summit and your involvement specifically?

Barbaros Corekoglu [00:01:07] Yes, 2021 is really an exciting year. For the very first time, the United Nations is convening a food systems summit and is the first time that countries, politicians, civil society, signs all constituents, really including industry, are looking at food systems and not talking about supply chains, value chains, this and that. So everyone is embracing systems thinking and systems approach and accepting it as the only way forward if we are to reach 2030 goals.

Matt Eastland [00:01:45] And so what's been your specific role in the UN Food System Summit and how has that worked with EIT Food?

Barbaros Corekoglu [00:01:51] Yes, so far the UN processes I have been involved in the action tracks. So action tracks with the delivery methods, one of the delivery methods of the summit itself. So there is an expert or as they call it, action track leader. We have developed solution clusters as to how we can reach 2030 goals as fast as possible, leaving no one behind. And I also been involved in the levers of change, most physically innovation, lever of change, which is seen as an enabler for the transformation of the food systems.

Matt Eastland [00:02:26] Wow, amazing. Sounds super complex, but I'm sure amazingly impactful. And with regards to the SME competition specifically, so what was the competition for? How big was this? And can you give us just a sort of a flavour of the sorts of people who applied?

Barbaros Corekoglu [00:02:43] Of course, I think from early on we really realised that we had to do something about the SME's we have to make their voices heard and we really have to put them at the centre of the transformation because SME's, they're often the ones that are forgotten, right? They're small, they run a shop in the streets or they run a farm. They're often times unheard. And we really have to do something about that. So to that end, EIT Food worked with the U.N. Food System Secretariat and the consultants running the SME competition. And we really helped them roll out and execute the best small business, good food for all competition. Our CEO, Dr. Andy Zynga, also served as jury of this competition, nearly 2000 SME's were nominated for this competition all over the world

from 135 countries. And at the end of the competition, the UN selected 50 of them, those that are most diverse, that are most inclusive, that are most impactful. To really become the showcases to inspire other SME's and other actors to take action.

Matt Eastland [00:03:55] Yeah, that's perfect, thanks for the summary on that Barbaros, and that's exactly why we're talking about these SME's today and this is exactly what we're trying to explore on the podcast. So that's great. And today, we're going to start by hearing from four winners who are focussing on farming and agricultural innovation. And in this sector, as everyone's going to find out, the innovation comes really in all shapes and sizes. So our first winner is tackling a huge farming problem using the humble toothpick.

Claire Sands Baker [00:04:25] Hi, I'm Claire Sands Baker, I am the director and co-founder of the Toothpick Company Ltd, which is a social enterprise based in Kakamega, Kenya.

Matt Eastland [00:04:36] So you heard there from Claire, who has founded The Toothpick Company, who've created a bio herbicide technology for farmers in Africa to help them fight against one of the big weed threats in the world, a parasitic plant called Striga.

Claire Sands Baker [00:04:50] Striga is a weed, it's on 40 million farms across the continent, and it attacks the root structures of maize, sorghum, millet, dryland rice. Those are the principal staple crops. When striga is in a farmer's field, they'll lose 20 to 100 percent of their crop yield. It's a pretty major problem and there aren't really very many good solutions. By the time striga comes above ground, they can't weed it because it's already done its damage. There is another chemical herbicide that's on the market, but it's not accessible to very many farmers and has to be distributed with gloves. And there are some hybrid seeds that are effective, but they don't help fully restore the crop yield for the farmer. So ours is a new innovation and it's really pretty exciting. It was developed out of Montana State University by Dr. David Sands, who also happens to be my dad. It's basically flipping plant pathology. He's using plant disease to kill a bad plant. Usually plant pathologists are trying to kill plant diseases to protect crops. And in this case, we're using the plant disease. We're actually trying to make it a little bit stronger by selecting certain spores that are more virulence against the weed, but not against the crop. We actually had to then work with local farmers to get this technology transferred from Montana State University and make it something that was really applicable to farmers in Kenya. We did this by working with an agronomist and with the Kenya AG and Livestock Research Organisation - Kalro - and figured out a way to grow the fungus that we selected on toothpicks, which is why we have the weird name, the toothpick company toothpick project. So we grow the fungus on the toothpicks. And that is a simple, easy way for us to get that to the village level. We transport the dried toothpicks. We're actually using wooden dowels now. And at the village, a farmer or an implementer, we're calling them village inoculated producers. The VIPs, they cook a pot of rice. They transfer it into a sterilised bucket and then they dropped the toothpicks in and shake it twice a day for three days. And all of that rice becomes inoculated with the fungus. And so then that secondary inoculum, simply gets planted with the maize seed, just a pinch of it with each seed and it wipes out the Striga weed.

Matt Eastland [00:07:17] What an amazing company. I mean, I've never heard of an innovation like this anywhere else, and, yeah, I find this kind of mind blowing. I mean, what caught your attention when you heard about the toothpick company?

Barbaros Corekoglu [00:07:30] Yeah, it is amazing what they have done right? So it is a true system solution with so many cool benefits at the same time. Food security, food safety, increasing resilience of farmers helping tackle malnutrition in the continent that is really suffering so much from it. And all this while preserving an economic value of nine billion dollars. So it is amazing. It's amazing what they're doing, preventing tackling food loss, preventing tackling food security, food safety, tackling, helping solve malnutrition on the continent. It's really amazing. And they are doing this in such a way that their solution is only attacking the problem and not creating any negative externalities. So it's not affecting the corn or sorghum is only affecting the parasitic plants, the striga.

Matt Eastland [00:08:23] Yeah, it's really amazing how they've sort of managed to just focus on one super huge problem and then develop this incredibly simple solution, which is really accessible to everyone. And I think for me that really is pure innovation. It's so great. And when we were interviewing Claire, she was saying that thanks to the work that they're doing in the toothpick company, farmers had then been able to increase their crop yields by approximately 42 to 56 percent. And not only that, but the product is safe, effective and affordable. And yeah, it's really remarkable what I think they've managed to achieve. You mentioned that they're saving...

Barbaros Corekoglu [00:09:05] Apparently its nine billion dollars of economic value

Matt Eastland [00:09:08] Nine billion dollars and that comes from where? That's because of the reduced fertiliser and of herbicide use or its...

Barbaros Corekoglu [00:09:15] I think that is all about preventing the food loss, harvest losses and damage to the soil of course. And it is amazing that is so accessible by simple toothpicks and okay they change it afterwards but is accessible to everyone. So any farmer in Africa can just solve that problem by just throwing around some toothpicks, I suppose.

Matt Eastland [00:09:37] Yeah, absolutely. And, you know, she mentioned that there is like a synthetic chemical which can be used. But of course, that is not accessible, it's unsafe. It requires, you know, certain types of transportation, people wearing gloves etc. You know, and I think it's great that the solution they've come up with totally avoids all of those problems. And, you know, we actually had a really thought provoking chat on this topic, our episode 'Has Modern Farming Failed' when we're looking at a conventional versus new forms of farming back on one of our podcasts, really, people should check that out for more information. But I guess it's great for us all to know that biological herbicides are actually really effective as well. So that's great. And yeah, this idea, as well as kind of using its DNA almost against the weed, I think is quite impressive. So they've kind of done all the technical stuff in the background. And then all that the farmer really needs to know is what do I do with this toothpick right?

Barbaros Corekoglu [00:10:33] Exactly. Sounds about right. Is an amazing solution. So accessible. I guess must also be avoiding, as you said, so many costs for farmers like sprayers and special equipment gloves, this and that. Putting all the solution in a single toothpick is a great achievement and a real innovation.

Claire Sands Baker [00:10:52] One thing that we've really tried hard to do is think about who the farmer is and what are her skills, and I say her because in Kenya, 80, 85 percent of maize farmers are women. And so how do we make sure that our innovation is something that is accessible, comfortable, familiar...toothpicks are familiar to everyone,

cooking rice is familiar, especially to women or cooking porridge. So these two steps that we've created, they're perfect for our farmers. It's quite different than shipping something overseas and then delivering it with gloves. We've really targeted our proposal and our product for individual smallholder farmers. And so I think that's one thing that sets us apart. And in our product development, we also focus on the village level. So we're not importing a product, we're manufacturing it in the village and we're providing jobs through that and boosting the economy locally rather than having a whole bunch of money just getting shipped out of the country. So those are some of our priorities, which is why we're a social enterprise.

Matt Eastland [00:12:08] OK, now from a company saving crops with toothpicks to another, saving crops from a bird's eye view, let's turn our attention to competition winners, integrated aerial systems from South Africa.

Dexter Tangocci [00:12:19] I'm Dexter, technology co-founder and director of Integrated Aerial Systems. Integrated Aerial Systems is a licenced drone service provider based in South Africa. Our core focus is to use drone technology in the agriculture sector to help improve farming practises while building a more efficient and sustainable future. We were founded in 2016 where we started doing agricultural surveying and over the last year have moved into crop spraying, where we currently one of only three licenced companies approved for crop spraying by drone in South Africa. Drawing on the knowledge we gained from mapping over 50000 hectares of different crops, we saw an opportunity to use this mapping information to improve crop spraying. One of the big uses for our agricultural surveys was in effect for farmers to conduct precision and targeted crop spraying on their farms. So for us, we saw a logical connection in offering crop spraying by drone, which wasn't really an option in 2016 when we started. But the technology of spraying drones has really improved since then. We began the process then of getting licenced to be approved for crop spraying by drone. After another long approvals process, we were granted the licence and to date we've sprayed... In 2021, we've sprayed a thousand seven hundred hectares of crops and it's being very well received by farmers across South Africa.

Matt Eastland [00:13:47] So there you were listening to Dexter from Integrated Aerial Systems, so what they're doing is they're integrating drone based crop spraying with intelligent data analytics. So what that actually means in reality is farmers are able to detect exactly where and how much of their crop is impacted. And they're able to target the affected area with precise crop spraying by drone, which again, is not something I've heard of before. So that's pretty cool.

Barbaros Corekoglu [00:14:14] Exact definitely. So this is really precision spraying that's really helped reduce the pesticide drift or, you know, pesticide going into water sources causing eutrophication, which actually is devastating for biodiversity in the regions. It's very dangerous for human consumption and really such precision based and precision drone AI high tech based spraying is really of massive help for tackling climate change, reducing the impact on our ecosystems and the biodiversity and, of course, the plants and people who live next to these farms.

Matt Eastland [00:14:52] Yeah, absolutely. From what we heard from Dexter, it's really massively reduced costs for those farmers as well. You know, and we're not just talking financial cost, like you say. So this is cost environment, carbon emissions and it's malnutrition. And Dexters really confident with the 2030 goal in mind that we have, that their technology is going to play a fundamental role in farming practises across the globe.

So he's really looking forward to scaling this up, which is great. And then when we were talking to him, Dexter went on to explain a little bit more about the actual effectiveness of their drones.

Dexter Tangocci [00:15:27] Just in terms of the efficiency of drone crop spraying, if we go on aerial application, it's done by manned aircraft, helicopters, microlights fixed to an aircraft, the first thing there is you're quite high from the ground in relation to the drone is you get something called pesticide drift. So you get a lot of unintended wastage of pesticide drift onto neighbouring fields that don't need to be sprayed. And that overapplication of chemicals really makes quite a serious negative impact on the surrounding environments. In addition to that, there's a big safety risk of having a human in a plane flying a few metres above the ground. In South Africa you know, this really unfortunately, quite a few accidents on an annual basis where we eliminate that completely. Aircraft unmanned and then the craft themselves, they're guided by our GPS radar positioned and we fly between one and a half and three metres above the crop at a very precise application rates. We get full cover penetration. So the rates of application and the type of application is superior to any other methodology. And that's why it's been so well received. And that's why we believe it can be rolled out on a much bigger scale than what we have rolled it out thus far.

Matt Eastland [00:16:40] So what does that mean, that in terms of because, you know, as soon as we start talking about, you know, farming and robotics and AI and all these amazing technologies coming through, people often then say, but doesn't that then mean job losses? Are you then just replacing humans with technology? But it doesn't sound like that's what they're saying here. It just sounds like they're complementing what they're doing already and actually finding just a better solution to an existing problem. Is that right?

Barbaros Corekoglu [00:17:10] I think that's right. Exactly. So we are using or deploying here technology, drones, precision drones to spray pesticides on crops. This is something that is done by tractors, heavy machinery, you know, expensive machinery at that. And we're just replacing them with simple drone. So it's not replacing humans. It's replacing their bigger, older, more outdated technological family members. Let's put it that way, perhaps.

Matt Eastland [00:17:38] Yeah, I love it. ok, I have another fantastic solution. Now on to our next winner. So a company who was working to advance farming livelihood's.

Lastiana Yuliandari [00:17:48] Hi, I'm Lastiana Yuliandari, the founder and director of Aliet Green an organic coconut sugar manufacturing company based in Jakarta, Indonesia.

Matt Eastland [00:18:01] Aliet Green is the producer of organic and sustainable food products, one of their main products being a coconut sugar alternative.

Lastiana Yuliandari [00:18:09] So organic coconut sugar is basically coming from organic coconut plasma sap and it is prepared traditionally and manually by female farmers until now, climbing up and collecting the sap always involve human labour. There is no other way to do at the moment. We do our best to process organic coconut sugar manually produced by the smallholder farmers to be a high quality products meeting with international standards.

Matt Eastland [00:18:41] It's great innovation from Lastiana there, so I guess what I find quite inspiring about what she's doing at Aliet Green is that, you know, they're working with so many individual small scale producers. You know, I think she's got a thousand and ninety percent of these are women. We know from a recent podcast episode that we did on gender bias and equity in the agrifood tech industry, how important this is. So it's amazing to hear that they're providing this work to so many female farmers as well as farmers with disabilities. Lastiana also highlighted how their continuous goal is focussed on supporting vulnerable groups such as women disabled farmers whilst making the food system more environmentally friendly. And it's also great, I guess, that it's a female owned social enterprise. I mean, what do you think Babaros I mean in terms of what they're doing, in terms of their focus on sort female farmers and making sure that, you know, disabled farmers are also included? You know, how important do you think that kind of work is that they're doing?

Barbaros Corekoglu [00:19:44] Exclusivity is massively important, of course, for food systems transformation we know all across the world, right? Women play a critical role in bringing the food to our plates, but oftentimes they're just disregarded, you know, pushed aside, not recognised. And it is so encouraging to see Lastiana, haven't taken this into our hands and really empowering our community and fellow female women. Now they're both producing and trading the organic coconut sugar. This means that they're creating extra new supply chains and creating new value and creating new jobs, new side sectors along the way. So it's really impressive with what they're doing, being a social enterprise again and supporting those that are most vulnerable and oftentimes disregarded.

Lastiana Yuliandari [00:20:31] As a woman owned business, performing in this competition makes the investment of our efforts to be part of a world food system well worth it, and then we aspire to be drivers of a food system change to ensure that smallholder communities and future generations can look forward to a healthy and sustainable future for. And as promised, when we participated at the best small business competition, we will continue to contribute to healthier, more sustainable and equitable food for the communities we serve.

Matt Eastland [00:21:08] It's interesting what she mentioned there about communities, you know, on like really kind of local, small scale. I mean, how important do you think it is that the change that's required in the food system, all the great work we're all doing? How important is it that it's at this local level? Do you think.

Barbaros Corekoglu [00:21:27] Well, I think there was this famous saying, right? 'Think global, act local' and in that spirit, it's massively important that these local actors, local players are now also embracing change and they're not afraid of the change and of the uncertainties. They're just like, OK, we have to do something about it. Let's get to it. Let's get our hands dirty. Let's change the system one locality at a time, one community at a time. And let's change the way we produce coconut sugar. Let's change the way we approach producing and coconut sugar. So it's really encouraging to have people like Lastiana and Aliet Green.

Matt Eastland [00:22:05] Yeah, absolutely agreed. More local high impact change needed. Definitely. And as we just discussed, for many cultures around the world, farming is really much more than just a job. It's also a way of life, especially in South Asia, which takes us to a final winner in this episode.

Mashrur Hossain Shurid [00:22:25] Hi, I'm Mashrur Hossain, I'm the co-founder and CEO of iPAGE Bangladesh, so at iPAGE we support smallholder farmers to cultivate smartly, which means we help them to understand their soil and surrounding and also the market demand and plan their cropping scheme accordingly.

Matt Eastland [00:22:46] So the mission that iPAGE is to help smallholders, to cultivate smartly, and they do this by connecting farmers with agriculture information to help them gain a much deeper understanding of their soil and also their surroundings, as well as the market demand so they can plan their cropping scheme more efficiently.

Mashrur Hossain Shurid [00:23:05] I have been taking part in different social drives, and during this drive, I found out that in the rural communities, farmers are the mostly underserved people and they needed to be supported mostly to any sustainable means. And also I am from farmer's family background and I have experience that how our forefathers, our grandparents have suffered because they didn't have enough means to do what they are doing for their livelihood in an efficient way. So that is when I thought probably I could do something for them that would help them to do what they're doing in a more smarter way. And that is where we started to work at the start up right now we are working and that was my inspiration.

Mashrur Hossain Shurid [00:23:47] At iPAGE, we believe that the global production of food should be followed by the demand of the consumer. So globally, we are wasting almost one third of our total food production. And this is something definitely we shouldn't be. So we believe that if we could somehow connect consumers demand with farmers production scheme, that is when we can actually drive the production according to the demand. And that is where it would be helpful for the farmers to add to the market demand. Send the demanding products to the market also get a better price for that production. Not only that, it would also help the consumers to avail the product of the food, the materials they want in their daily lives, and a safe, chemical neutral process. And that wouldn't be adulterated or it wouldn't have to be preserved for a long time. So we are seeing that there is a mismatch in the production and the distribution. So the demand is not matching that production, the production isn't matching the distribution. So we have understood that there needs to be a connection in between these two notes. And at iPAGE, we are working to connect the demand, the market with the production hub, with the farmers so that the farmers can understand the market and drive and design that production scheme according to the market demand. So in an ideal space where we want to go with innovation, we are working here. We are projecting a future where consumers would be able to connect the farmers directly and put their order of a particular produce, particular crops, particular vegetables to the farmer. But by the tapping of their smartphones, probably, and after a certain time as a certain season, they can get delivered with the product they have pre-ordered through a mechanism. So that is where we want to put our effort in and that is the future we want to achieve in some day through our innovation.

Matt Eastland [00:25:48] So it seems to me then, what iPAGE are really looking to do, like where the innovation really sits is you're basically connecting the consumer directly to the farmer. These are different parts of the food chain, which are generally quite stretched out right? So they generally don't connect and communicate with each other like that, where one's producing what the other asks for specifically, does that sound about right?

Barbaros Corekoglu [00:26:12] That's right. I think Mashrur is really a prime example of this generational renewal. So it's coming from a family farm, having produced crops

traditionally for decades, for generations. And now he's connecting this traditional way of producing food to, as you said, Matt, to a fast paced, modernised consumption patterns and really help support farmers and help improve their resilience against shocks and crises. And covid-19 has been a good example of how fragile these production practises are. And iPAGE is really spot on, farming has to adapt, adapt to the fast paced consumption. It has to be consumer centric, and it should allow farmers to adapt as quickly as possible so that they can be compensated for all the hard work that they're doing.

Matt Eastland [00:27:01] Yeah, absolutely. Absolutely. You know, it's it's really interesting, I think, to see the journey that he's obviously been on as well. Like you say, kind of he saw the need, what he really wanted to help. So he had like purpose here. And I think that's something that seems to... We see a lot certainly on the podcast when we're talking to start ups and founders and also, of course, for the SME competition winners that we have here, that there seems to be something about these change makers, that they're sort of driven by purpose and they sort of step up right? They're the people that the world needs.

Barbaros Corekoglu [00:27:40] Exactly. They will show the entire world that anyone can make a difference.

Mashrur Hossain Shurid [00:27:46] Organisations or start-ups that are working in the food sector is not the same like others. So we have to understand that we are in an industry that is impacting our daily lives every day. So food can change people life, food can drive developments, food can drive us towards a better future. So when a start ups like ours is working in this industry, we have to understand one simple thing. We may not have to be seeing profit or financial gain from the day one. It might be a difficult journey. It might be a long journey. I believe the thing that should matter most to us, to the start-up owners, to the co-founders working in this industry is the change we are bringing in farmers, into underserved communities of farmer's life. So basically, if we think like we would be impacting 100 farmers, 1000 farmers, it is something we need to capture the most instead of thinking of how much financial profit we are making every day. Because once we become the part of changing these communities lives together, by empowering them with technology, with data, this is going to impact the whole civilisation. And it will not only help the community we are living here, it'll also impact the global communities. The impact will spread over the regions. And for that purpose, we have to be persistent. We have to be patient. The result will not be coming right under day one. I would love to send this message to the global community that third world countries, the developing countries innovations taking place in here, not only we need the financial or funding sector, we also need to share experiences, show stories how you or the developing countries or the developed countries have solved particular problems and overcome difficult situations that would help that new generation, the next generations who are working the food sectors and definitely platforms like UNFSS or EIT could help us to connect with experienced peers. Those experiences would be very, very fruitful for the next generations like ours. So this is something we need more and we would love to have similar types of approach or initiatives from EIT or any of the global communities in future.

Matt Eastland [00:30:02] For anybody who wants to know a little bit more about this, we've actually had another podcast episode which was entitled 'The Journey of an Entrepreneur', where we actually interviewed three different start-ups or three different stages of their particular journey and what they experienced. And again, we kind of found this time and time again that they all had this purpose in built into them. And a lot of them were actually accidental entrepreneurs, but they just couldn't sit by idly and do nothing, which is incredible, you know, and we need more people like that in the world I think.

Barbaros, we've heard from some amazing companies today. What do you think are the main characteristics of these purpose driven companies that have stood out to you? What are the traits that have really made these winning projects?

Barbaros Corekoglu [00:30:47] I think it's clear that all of them have found their purpose and they didn't hesitate acting on it. They're here to put their best foot forward and they really tackle the problem head on. It is really fascinating to see that they really wanted to benefit their communities and make sure that the solutions that they provide deliver long lasting results.

Matt Eastland [00:31:12] Thanks very much, Barbaros. I mean, it's been super fascinating, as always, and it's an absolute privilege to be on the podcast because, like you say, we just get to hear about and talk to the most interesting, most fascinating, most innovative people out there. And I wasn't aware, for example, of any of these SME's until the UN Food System Summit. So that's a really great thing that you say, building that awareness. So it's been great to hear from that first batch of winners, from the 'Good Food for All competition', which was held in conjunction with the UN Food System Summit. But there are still more winning companies to learn about. So really, for our listeners, please stay tuned for our part two episode where we're going to be speaking to many more of these SME's as well. So Barbaros a massive thank you for joining us today. And if anyone wants to get hold of you to talk about their work, changing the food systems, change in the world, what's the best way they can do this?

Barbaros Corekoglu [00:32:07] Well, you can they can always reach me to LinkedIn and EIT Food website. Of course, I'm accessible and I would love to hear from them and work with them to scale their solutions.

Matt Eastland [00:32:17] Perfect. Thank you. And of course, you can also head over to the United Nations website at un.org to read more about the competition and also our EIT Food website to learn more about all the start-ups and about our involvement in The UN Food System Summit too. So that just leaves me to say thank you, everybody, once again for listening. This has been The Food Fight podcast. As ever if you'd like to find out more, head over to the EIT Food website at eitfood.eu where you can also download a free copy of our gender equity report from our previous podcast. And please also join the conversation via #EITFoodFight on our twitter channel @EITFood. And if you haven't already, please hit the follow button so you never miss another episode. That's it for now. See you next time.