**B2CF - Interview Coffee entrepreneur, Pereira - 1-7-2022**

**Ready. So, before anything else, thanks a lot for your participation. For your consent signature and everything else. Firstly, I want you to tell us what do you do, who are you, your full name. Something very general.**

Perfect. My name is [name]. I’m a mechanical engineering. I pretty much work with everything around industrial engineering. At the Technological University of Pereida and the Catholic University of Pereida. Currently… In the mechanical industry I worked for 10 years and in parallel I’ve worked around coffee regarding education, crops, cultivation, commercialization, let’s say it has been a 10 years’ work. For the last 3 years we have focused on products development, commercialization and technology evaluation, for industrial precision. From the projects that highlights the most nowadays, is the spectroscopy analysis of coffee cultivations, where we do photosynthesis evaluation in crops, for budding, maturation, leaves, and stems analysis.

**And who did you do that with?**

It is personal. The technology we were able to figure it out with Cenanoa. We did an adaptation project and we are currently working on the technology’s patent. Because it becomes transversal for all of the crops. On the other hand, we have been working for 2 years on a co-product, or sub-products, based on coffee peels. From this, we can highlight an entrepreneurship project we have together with [name] and [name] which is Cafeten. Actually, we just started on the development of a bag for food packaging, based on coffee peels. We started the development also with Cenanoa. Additionally, within the chain, the sophistication of the value chain. Let’s talk from the company, like unintelligible coffee company. We don’t only have all the value chain. Let’s talk about crops, about transformation, about torrefaction and about giving added value. Otherwise, about the commercialization through the coffee shops or by direct delivery to the final client.

**Super. How long have you had the company?**

Since the foundation, we have been here 11 years. But back then it was only crops and delivery of green product. Starting 6 years ago, we have been working with final transformation processes and 3 years ago we started with co-products. On the side. And this year, I was called by the rural development secretary to provide advising on farming for a big macro-project on the technification within the sophistication of the value chain and co-products. At the Pereida level and now we are making it transversal.

**And what is that you have to do here at the secretary, specifically?**

We are at project management. We are going down to… Right now the idea is to obtain a little bit more of resources, royalties, the bank of unintelligible for the development, intermerca bank Aleman. The Aleman bank. So, with basis for two projects that we are currently pushing into the secretary’s agenda.

**Ok. Super. Regarding the challenges that you have encounter in your experience, here in the secretary, which ones have they been? What would you consider are the most important ones?**

Here, the challenges… the most important challenge is to make a process… an improvement process that becomes transversal. That has a prospective vision towards 2030, towards 2025, 2030. Yeah, that independently of changes in public roles, it remains written and can be developed through time, right? Let’s say that at the secretary level we have such an number of documents for plans but they don’t go ahead at the execution. Like the… like the…

**Yeah, of course. I understand you. There are many projects being generated but they get stuck when the people turnover. If you could improve something in your processes at the secretary, what would it be? That would make you say “I would like to improve this”.**

To become… It would become into an improvement, if the actors related to the current coffee and cocoa chains were to be concatenated. My specialty. Well, my line is coffee. For them it to become transversal meaning that the agricultural secretary, the coffee farmers committee, the rural development secretary, the Pereida’s Technological University, CENAS, all of the actors, could get unified with a single goal. Not many actors with many goals. Because then you lose the aim and there is not a prospective vision.

**Regarding sustainability from the two sectors in the region that we are discussing?**

It is important. It is important regarding sustainability to tell you about sensibilization within the main actor, which currently are the farmers. While… Within this people, within the farmers, for them to have the sensibility and the common sense to understand that it is no longer climate change but an climatic emergency where we can generate added value to all of the biomass, that sensibility will create… There is paradox and it is when you start teaching people how with the trees, by taking care, with the trees you can attract birds and the birds attract tourism and tourism brings… Also honey, from beekeeping, also provides them with food and they become coexisting system and with that, they also sensibilize. With that sensibilization it is easier to approach them to talk about this. Regarding the work with do privately, we have had a coffee growers’ federation for 110 years, together with an agricultural process and in my region, which is in the limit of Santa Rosa and Chinchinaca, they only started to try their own coffee 8 years ago. Because we told them “try you own coffee. We roasted it for you for free. Your first roasting packaged. But try it. Don’t sell it this time”. And thanks to that. They had never tried their own coffee. They would just load the car or load the mule and deliver it to the committee. Sell it and going to the supermarket to get other products. And so, these sensibilization processes begin because they start to wonder. “Try it, what does it taste like? Oh, come, see. You can roast it differently. And see that if you do beneficio, too”. And so, questioning starts to happen. But that goes all the way starting from sensibilization. There is no other path. There is no other path.

**And regarding to… What activities do you think could add up to the sustainability of the sector? For example, certifications, trainings, I don’t know? What do you think of? That you might say “I can do this and add up to sustainability”.**

Are plans… Let’s call it… unintelligible. But where you coexist. I… the institution will support with some resources. The people in the field, working, support with a different work. And all of this generated a common good over a big project. Right? I mean… When what we are doing doesn’t hurt us, we haven’t accomplished it. So, if you go and “oh, look, this machine”, there are machines that are simply left and get lost in the plot. But if you tell them “look, let’s work with this. It will give you this profitability but it will go macro. Let’s talk to an institution, let’s talk to privates”. Then that can be the support.

**There is something and it is, what experiences… Do you maybe have any experience working with bioenergy or with oils from the residues? Or you haven’t touched that topic?**

No, look, with bioenergy, no. What we have looked for is the utilization of the peels with the factors. Let’s say some are for the use in feedings. It is given a little of added value with a little of transformation and everything becomes more sophisticated. While with the field of bioenergy… I go back to the previous concept. To sensibilize people, to handle a pH, does a follow up verification. He then goes to utilize the biomass in a way, we have to maybe do measurements of the… there we would be working with temperatures and no. You give them the equipment and believe me that, to say something, the 70% will just leave the equipment there. While, if a guild is formed, they are coexisting, some people are already wining techniques, for them deal with that. That’s why we it is not being worked. Biodigesters were only being worked years ago for a matter of fertilizers. Of organic fertilizers that are amazing. But right now, between generating fertilizers or something with a little of added value then let’s go to… Because, let’s say, that in my company we don’t use chemicals. If we use chemicals, it is for something else.

**Super. What challenges do you find in order to manage these residues?**

What challenges… Right now, technical evaluation… Let’s see... We need to look at this at the volumetric level. Let’s talk about this… If I’m not wrong it 125 000 families that produce coffee. From these 125 000 families, 124 990 are not utilizing these residues. Therefore… what we are trying to find out is, how to generate the massive utilization of those residues. Let’s talk about this. From these peels, that we are talking about, there are three lines. The organic, the non-organic and the contaminated one. That means there are three lines to look into to generate utilization of biomass.

**Meaning, there are many opportunities you can see**

Right now it is an ocean. Right now everything can be done. If you look at the exportation level, Chile is working with algae-based food, with plant-based materials. China is working on tea follow-up, what we are also doing here. There is also subject of containers… An infinity of things. Any idea you have could be done.

**Super. I’m going to tell you a little about the project. The project is called Biohubs and what it intends is to generate a win-win for all actors. What is intended is to use the biomass, biomass for the obtention of energy or water treatment. Obtain the biomass from these spots and take them to some sort of refineries or biorefineries, where products such as biocarbon and biofuels could be obtained. These biofuels could be used by maritime companies, right? That require of these processes and regarding the carbon, it could be used for the soil, energy, water. Right? This project considers non-alimentary biomass but forestall, agricultural, and urban residues. Or even invading species that in some areas could be considered as a non-favorable biomass. What is intended is to generate an impulse towards regional development, like you said. So, to understand how actors articulate themselves and collaborate regarding grounds management, agriculturally, how they generate employment. Right? And so, this is a vision for the project. This is a general view of what would be ideal within the project. It is also very important for us, and that is why we are here, to understand if, whitin this new value chain, as we intend to create, we are trying to generate a new value chain, you consider it to be viable, for it to not viable, based in your opinion, to have a small explanation on what you think.**

That is… If we look at it at the macro-economic level, right now what is happening, with Ukraine, is a gas deficit being produced and the tendency we have regarding petroleum derivates, leads for the industry at the global level, let’s focus at the European Union, to switch towards charcoal. That will generate the double of greenhouse gas, which goes against the protocols, particularly the Tokyo one. To generate this starting from residues, here in Colombia, requires a large number of residues, of visions, with the most important thing here is to lead to the local and community development, independently. If there will be a biomass extraction and it will be converted, for these benefits to reach the unintelligible machinery. To really make it socially relevant, and environmentally friendly. So, at the economical, macro-economic, environmental and social levels, it is totally viable.

**And do you think that, well, as an institution, speaking from the rural development secretary, do you think they could participate in this value chain?**

Yes, yes. Of course, there is a vision for that.

**And where would that be?**

There are programs, right now I can’t remember, where there is a subject on the utilization and mitigation of watersheds, where there is mitigation of the hydric resources but there are sources that would allow those residues to create biomass, basically. So, believe me, it is viable. There are two programs buy I can’t remember them right now.

**Thinking of the people participating in this organization, how do you think reasons for people to want to participate could be created? For people to want to take part of this value chain. What should we show them or what should be offered? For example, employment, economical benefits. What do you think could be the hook, sort of speaking?**

Look… Everything is so lengthy around these issues. Right now, there is an element we bring from… We import it, on the matter of fertilizers, and the problem is that at the coffee farming level… Right now, coffee farming has some very important costs, on the subject of manures, fertilizers being used. It has had a 300% increase. We talking about a lump of, anything, DAF, had a prize of 75 000 and now you find it almost at 190 000 pesos. So, while there we are handling a subject on soil improvement, or there is an existing benefit, for them to obtain a benefit that could be generated from us, benefits such as fertilizers, work… For it to reach the base. That’s the most important. That’s the most important because it allows us to generate development. To generate development in agriculture.

**What do you think, if we start with this proposal, with this bet, what would be the obstacles we could find? Considering your experience from the secretary, from your work. Because, well, the obstacle could be… what?**

Firstly, for it to get within public policy.

**And that is needed, right? For there to be a policy that pulls it.**

For it to pulls it. Yes, because it is the only way in which it will transcend. If you start it but, done, I support you for one year and you have a factory that is worth 1 000 million dollars, that won’t happen.

**What other obstacles you think we could find?**

Around that, obstacles… Resilience. Let’s talk about the fact that within the factors that impact on this, sensibilization… Sensibilization is going to be very complex.

**Sensibilization?**

Yes, talking.

**The first part.**

Yes, the first talk. For the people, government, privates, because there will also be privates. For all of them to be sensibilized, since it will provide an important logistic chain. Needs that maybe haven’t been identified yet but will emerge on the application.

**What sort of necessities pop up in your mind? For example, you mentioned logistics. What others?**

Yes. For example, transport. Right now I can think of that.

**Is transport complicated?**

Yes.

**Why?**

Because there are not access roads. So, without access roads, there is no development unintelligible. If you have 100 plots but you don’t have means to access to them then that where the (problems) begin to…

**So, what do you think… Ok… This chain, this new value chain, what could it threaten or what could its operation affect?**

What could affect it? One, if we were to utilize resources to generate fuels instead of food. That would create an important alimentation deficit. I think that would be the only thing.

**What do you think could be, speaking of the cocoa and coffee sectors, the harms or affectations that could be caused to these two sectors? Or instead, could it be advantageous? Could it be good? What do you think?**

No, I mean, if there is an analysis of the chain, where the final residue… I saw it somewhere here. Where fertilizers are generated from that biomass and where these biomass fertilizers go back… That is very important. There is something here that is important and that is for it to be accepted from the federation. We know that the federation, within the expansion process itself, has needs within their core business around fertilizers, to optimize that. So, within the policies the federation has, which comes from the agricultural ministry, what is their vision on that. Because they are the ones who regulate at the federal level and right now…

**Of course. Perfect. So now, I’m going to show you… We are specifically going to talk about coffee, which is the one you might understand the most, right? This is a relationships matrix, where we, basically, positioned different actors, where we identify a power-interest relationship. As such, on the top are the ones that have more power, just the same as here to the front. And the first thing is to identify whether you see any other actor (missing) and what would that be? For example, we placed the national government, the regional government, right? The municipality. We think it is important. In this case, we were talking about Biohubs that pretends to provide the maritime sector with this fuel and, as such, that industry has to be here. The communication platforms, right? Transport. Biomass collectors, for that process. The academia. Coffee growers, Cenicafé, cooperatives. The technology providers, the national coffee growers’ federation and the biorefineries. So, the first thing is for you to look at it and identify if any of these is not required or if there is anybody missing. And then we will discuss on the location. I’ll leave them to you.**

**END PART I**

**The idea is, for this square, from this grid, from this matrix, what do you think could be missing? What organization, what institution, what actor?**

Yes… It requires a little of analysis because coffee has many factors. But, within the national government, it would be centralized in two ministries. That would be agriculture and transport.

**And they would also take part of this.**

Yes, they are required here.

**And where would they be?**

They would be here, with high power.

**High power and…**

High power and a little more of interest, because they are involved in the current policies.

**Ok, perfect. Somewhere around the middle, with high power.**

Yes, correct. Somewhat on top of the maritime industry. Somewhere next to it.

**Agricultural ministry and…**

Transport ministry.

**Ok.**

They have the 2030 country vision. Within that, there are also autonomous corporations that participate in regulations…

**And those where would you place them?**

Corporations? Over here.

**At the center, kind of low?**

Yes. Let’s say they provide support and they are complementary to the processes.

**Meaning, from the first square, between low power and interest somewhere in the middle.**

Yes, somewhere in the middle. There is something very important regarding exporters. Nowadays, exports might or might not be friends. Why is that? If you are taking away the raw materials they might need right now, we have to find a way to link those actors to the production chain. I don’t know if you’ve seen the exportation levels. Coffee peels is taking over. There was a moment in time during the pandemic where it has taking over the flowers.

**Coffee peels. Who are exporting coffee peels?**

Here, they are privates. They are privates. Almost all. You can find it is as cherry coffee.

**Cherry coffee? Ok.**

Yeah, and that is pretty much it. I was going to talk about the technology subject but it is there.

**It is already there.**

I think I lower it a little more.

**You would lower it? That’s what we are doing now. From these here, which ones would you move? Which ones would go higher or lower?**

Of course. Technology providers we should leave them somewhere in the middle.

**Somewhere in the middle meaning the same location but with less power.**

Less power, yes. The exporters I would put them where the technology providers are currently because they really do have power.

**They really do have power?**

Yes.

**Ok. Which other would you move? For example, government, do you think it is ok where the national and regional are? Do you think we could move them?**

This would be of regional or national impact?

**We are currently in the process, to prove that. But the idea is for it to be something local.**

But if it is about that, the national one is… I mean, I would leave this one here, how embarrassing if someone sees me. The national one, the regional and municipal.

**So, at the same line in which the national one is, like a small scale?**

Definitely, like a small scale because to be able to generate a follow up, it requires of land use planning policies, also aligned with the vision from the national government.

**To be aligned with it.**

Yes. It must be aligned. And right now, I know there is going to be a point for investment from the current incoming government…

**At the municipality?**

No, the national one.

**Regarding the communication platforms, would you leave them there?**

Communication platforms… I don’t have clear what those platforms are.

**For example, to design strategies, I don’t know, to develop strategies or videos or software that allow for different commercial actions or something like that.**

I would leave it there but way forward.

**Meaning, on the same line it is but with way more interest?**

With way more interest. Let’s talk about… Yesterday we were with some agroindustry actors, and let’s say, there was a similar discussion about the technology being applied in coffee plots and they said “Juan, if you want it now, we do it now, if you want it tomorrow, it can be done because that’s the tendency”. So, we have to give it a bigger interest.

**About transport, would you leave it at that location or would you move it?**

No. I think transport is ok because…

**Biomass collectors?**

That is… That is, what I said, what about the collectors if there are no paths to reach those collectors? Let’s talk about that. I’m going to give you an example with the bananas. For the bananas, a jeep has to pick it up because the truck can’t reach. From there, you transfer it to the truck and from the truck to storage. Because of the availability of paths. That is a reality of our agricultural system.

**Ok. Super. Would you leave academia at the same position or would you move it?**

No. Academia is transversal and in order to be able to…

**And coffee producers. Coffee growers, where would you leave them?**

At the highest point and at…

**With high power and high interest.**

No. Lies. With high interest but with lower power. The coffee farmers power is medium. Now, if we go towards coffee growers that… smallholder. We have to make a distinction between smallholders and landowners. The landowners have power while the coffee farmer helps for that equilibrium…

**Ok. Perfect. With what actors have you collaborated or recognize to have some relationship with the agriculture secretary?**

Right now, with the agriculture secretary, the execution of this kind of process is handed in to the… No, both agriculture at the department, the department’s agriculture secretary and rural development and environment, the projects are handed in to the coffee farmers departmental committee, departmental and municipal. There are some guidelines provided directly by them and they become transversal at the academia level through cooperatives. And that’s basically it.

**Would you maybe want to add anything else? Do you maybe have any question regarding what we’ve done? Do you have many questions left?**

No, no. Why biomass and no other products?

**Why coffee and cocoa biomass?**

No, not why coffee and cocoa biomass but why transforming it into biofuels and not into others?

**This project right now identified that but we are also identifying many other things that could be done. So we are currently at the evaluation process to see what they are doing, how they are doing it, but at the regional level. Identifying what is being done but it has a potential we believe to be very interesting but it still is quite open. Done? Ready, well, thank you so much.**