**F24CF - Interview coffee farmer + experience coconut energy project - 14-7-2022**

**Prior to anything thank so much for this space and off we go. Tell me a little about what do you do, in general, your name and everything.**

Unintelligible. I’m an entrepreneur. I have been an entrepreneur for 24 years, creating companies. Right now, this is the 4th company I have created. I have a company that works on importing and commercializing equipment for electronic safety, communications and solar energy. Those are the three areas for what I import good and for which I have a distributor, I have one that provides the installations and advise in the whole field of renewable energies. On top of that, about 10 years ago, I got into the agro sector, seeking for alternatives to what I had. And I was curious about farmind so I started with citrics. Currently, I have 110 blocks sowed with citrics: orange, mandarin, lemon and maracuja. And 7 years ago I bought a different plot, which is the Mateo el Grande plot, where we began to work with coffee. Currently, we have 25 000 coffee plants, within which we have 3 types of coffee: catimore, geisha and Castillo. In the… Let’s say, when we have coffee as such, we have several processes that start from the recollection, the beneficio, everthiing. In order to obtain a good cup, we start at the social part, educating the plot worker on how to collect the coffee. Not doing it fast but doing it properly. For example if, during harvesting, we get spotted or green beans, the plot gets harmed, or the whole process with have for the coffee.

**How big is the coffee plot?**

The plot is 21 blocks but we only have crops only in 9 blocks. We have the rest as a reserve. We try to conserve the reserve, the animals and everthing. Because it is a runway. I’m watered by Rio Verde and a water spring. I don’t have neighbors around because I’m separated by waters. I’m separated from any neighbor.

**It must be very pretty. Why did you decided to get involved with coffee, specifically? How did you get into it?**

Because on a random day, there was a coffee committee buying some supplies and I got to hear that there were some benefits and things. My attention had been called by coffee but I never actually got to study on it. But then they gave me a pamphlet, I went home and started to read it about the different coffees, about the tendency towards where coffee was going. And then I thought it was worth it to start developing a process so I went to get the first plants. We started to sow it, and that’s how I started. I started there.

**Within the plot, what is your role? How does it work there?**

**END PART I**

**Thank you very much. You were telling me what was your role in the plot.**

In the plot, I am in charge, firstly, to arrange the personnel. I work first on the cultural side of people. I integrate them for us to make teamwork. Otherwise, if everyone is on their own, it doesn’t work. So I integrate everyone. I give everyone a role that they have to fulfill. Weekly, we schedule the required labor to be done, according to the work requirements indicated by the agronomist. He goes and tell “See, you have to do this and that” and based on that I schedule it.

**What struggles have you faced in the coffee world? What challenges?**

I think you never finish getting acquainted with coffee. I’ve seen people that have been working for 10 years and they are still learning. What do I see as complicated right now? The prices are too high. The prices are too high and we must try to get the biggest benefit from all of the process. Allow me to explain myself. Starting when I collect the coffee, I go and choose the process. It can be a natural process, a Honey process or washing. According to that, I am left with by-products. The ideal, towards achieving sustainability and balance, is to be able to utilize all of the by-products I am left with. If I am going to do a washing, what do I do with the cherry? Right? What do I do with that? Do I transform it into fertilizer? For nothing to get wasted. That’s what we have to achieve. Because, otherwise, it becomes a contaminant. It becomes a waste from the plot and to get rid of it, throw it away or do something with it, I require of a person. Therefore I have an expense there. All of these are the factors that we have to work on in each of the processes. Some of the things we have tried to improve but we haven’t reached the maximum, no.

**Regarding, for example, on waste management, what do you do with the residues that generate in the plot? From coffee?**

We were experimenting with a fertilizer mix for cattle. And that worked but, since it is not constant, for us to be producing that material throughout the year, we did that process where we did it, it fermented, we did the recovery and everything, it was fed and it worked but…

**With the peels?**

With the peels. But there was not a study to claim “Oh, yes, the cattle gained 100 grams or 200 grams after it…”. No. They were fed to see if they would eat it and they ate it.

**And they didn’t die.**

No, no. we tried to do some biolo(gical studies)’s and such but we lack more real studies on the matter.

**What strategies do you know regarding sustainability? To guarantee sustainability at your plot or that you have heard could be done. I don’t know. Certifications, fertilizers, trainings. What do you do?**

What we have done is because we have shared knowledge together with other people and we try to dabble in it. Let’s say, right now, I am doing an 8-month process with California worms, where we are doing fertilizers. Everything in a very artisanal way. We got some tanks, we perforated them, we got the worms. Now we are generating humus and we are generating the liquid they secret to fertilize. We haven’t done the first application yet, but we already have it. Therefore, we have to start to look into those results because they help, let’s say, on the costs of coffee production. I’m going to talk with you with exact numbers because I like numbers. For those 25 000 trees I have right now, ranging in sizes from 2 years up to 8 months, I need of three people weekly. Why? Because while I clear the trees, while I… while we do cleaning of the soil in order to do fertilizing, applying fertilizer, while we make it to the lot, because it is done by lots, 17 the lot 1 should have already started to get worked on and so on. In order to give maintenance all day for you to see the results. I could manage it and get people out, but I start to see growth differences between lots. And the cost of workers is a high wage. So, if I make it with numbers, with wages for 6 months, it adds up to a cost of almost 18 million pesos, on average.

**How much is a wage? Do you pay it daily?**

No, they are there as base workers. So, let’s say, these people have minimum wage plus benefits and all. If I add up benefits and everything, I reach 21 million pesos.

**Son of the… That’s a lot.**

And I look at the production I’m obtaining from the coffee in those six months, it leaves me with 23% profit, more or less. Because we have to consider the costs from fertilizers and all of these things, right? And fertilizers are expensive right now. I had to apply 18 times 18 plus complementation, and the lump is currently at 238 000 pesos. And with that lump I can only fertilize around, let me tell you… 300 grams…

**You add 300 grams per tree.**

40 000, divided by… 114 trees. So, can you see the amount we have to apply?

**A lot. And, regarding on what you have heard people do with the residues in other plots?**

There are some that process that into jam, into wines, others do compost. Yeah. Let’s say, for jam you have to fulfill INDIMA requirements, you have to set up a lab, a production plant. I’ve seen other people doing it a very artisanal way. I don’t know how far they can get with that artisanal process. I don’t doubt it is nice because you eat it and you think it is very good but for you to make it to supermarkets or further outside, you have to fulfill requirements. And that is as far as I see people going. I have a colleague doing wine from coffee. A coffee wine, and it is very good, but she doesn’t have anything. She doesn’t have registration, she doesn’t have INDIMA, she doesn’t have anything.

**And why is that?**

According to her, when she went to do some procedures and she needed some money, and I think that was as far as it went.

**Meaning the limitation might also be investment?**

It could be investment.

**The regulations, according to what you say, ask for a lot?**

I don’t think the problem is regulations. When you want to do something, you have to adhere to rules, to parameters and meet standards. I think that it might be lack of knowledge or lack of interest for doing things. Or it might be happening what happens to a lot of people. They start supposing things. Like “No, you can’t do that” or “No, that has a very high price”. And it remains at suppositions without checking in reality how much it is.

**Regarding to energy projects, have you heard anything related with residues? Since you work with that.**

I was… I was analyzing that with a Mexican colleague, about three years ago, when this person talked to me about biomass, about being able to do that with biomass. Me, being in the field of renewable energy, I have some bio generators, I even have installed them around Nariño, but those bio generators operate with coconut fluff, with “capacho”. With that “capacho” we generate energy. There is a foundation, where they recollect, they are women, they recollect all of that capacho. They go and… It is sort of a… How to call that? A deposit? No… I forgot the name. Well, sure, it is a gathering spot. It is a gathering center and everyone goes there with their coconuts, and they weight it and hand it in to the cooperative, the cooperative runs that, and that capacho… Every day, they have that raw material and with that raw material they generate 20kW/h. That is what they are generating.

**A lot. How did you do for the process of… Did you import them?**

Yes, I imported them and that was done together with the Nariño Government.

**Oh, ok. That was financed by the government.**

Yes, the government financed it.

**Why do you think… Are there more cases, here in Colombia, that you know of?**

I think there is another one in Cali based on trash. They have one for gas and one for residues. In Cali. I don’t have the exact fact, but I do know the engineer who was in charge of that.

**Oh, it would be very cool if you could share with us or get us in contact with him. That would be very cool. Let me tell you more or less what we are trying to do. The project, the proposal, is called biohubs and it intends to generate a win-win, right? It intends to generate a value chain from residues utilization. Here we have plots, who provide that biomass, we would take it to a transformation spot, a biorefinery, and from it we would generate 2 products. The first one is a biofuel, which we believe could be used in the maritime industry, and the second one is a bio carbon that could even be used as an organic improver of soil, right? It would have different purposes. And what we want to do is utilize residual biomass. For example, here, we are thinking of coffee and cocoa. But, as I mentioned, the project also considers Spain with the olive oil industry and Africa with the utilization of an invading species. After identifying biomass, taking it to the transformation plot, transforming it into biofuel and generate the carbon that can be taken back to the plots and the communities.**

With that carbon could you do clean combustion? Or what?

**It could be, here…**

Or is this a mineral for…

**It is a mineral that could be used in the soil, as energy, or for water treatment. Just this carbon alone. And this biofuel, that we are considering, could be used, for example, by ships, planes, but it also could be used to make paint, tires, fertilizers, plastics… Right? It would have a very broad usage potential. Right? So, this technique, would have these plausible products. What do you think? Since you are involved in this field.**

No, this is cool. I think this is very interesting.

**Why?**

Because, firstly, you reach an equilibrium point both for business, let’s say for you, but it would also be business for us. Why? Because, something that is a waste for us, could be transformed and then returned to use if for our benefit. Let’s say, we won’t see it as me sending you that cherry and receiving a… No. But it returns to me to improve the soil or for me to generate energy. The carbon serves me to generate energy. If it is clean, it is a clean combustion I could do for the silo, right? For me to go forward with drying coffee with that. So it is interesting. Because…

**And would you maybe see yourself somewhere in the chain?**

Because, what happens? What happens? Let’s say, I go to the thresher. I sell the coffee, they thresh it and give me back that waste. But that waste I go and put it in but it is not clean combustion. It is a contaminant. I help them get rid of it but I burn it and at the end I’m generating contamination. Therefore, I don’t see it through there. I think that the carbon thing is interesting.

Do **you think you could participate in this type of chain? Where do you see yourself? Where can you envision yourself within this chain?**

Where do I see myself? Firstly, I am part because of the plot. And I would like to be involved in that part, in the processing. I would like to be there and look. I have a plant in Mulaló. I work with bio generators and we do… We refine all of the… Let’s say, I buy Ecopetrol their contaminants pools. And all of that crude. I go and refine it. So, we generate fuel for the ships. I even buy the cesspit from the ships in Buenaventura and that, because that is filled with water and other stuff… So I go and, via heath, I get… sometimes I get diesel from the yellow machinery. If you want, I can show you pictures.

**Oh, wow. Very hard working.**

I’ve gotten involved in many things. They are starting to weight on me. They are starting to charge their bill on my health.

**Oh, well, but it is already a new phase. In this model, how do you do to keep these biomass providers? To keep these relationships, what do you think can be done?**

In this? For this you have to do a very important social work. We start, and I have the experience because I witnessed it in Tumaco, in Guapi, in Satinga, el Charco, in Llorente, in all of that region, in Nariño, from the grasslands downwards, and I saw how the first thing that people got involved in, for 6 months, was going door by door to educate the people and showing them the benefits. So people would understand what had to be done. Why? Because here, they initiailly had, for the gathering center, before it being the gathering center, they had a larger bonification if the coconut was already peeled. And so, the caspacho was spilled all the way, on the roads. You would see it everywhere. And so, teaching them about how it would have a lower value, how it would have a lower value but there would be a benefit, and right now I think they have a discount, at that electric plant, of about 200 pesos, for those plots. They have a subsidy.

**Oh, that helps.**

Of course. Therefore, here, try to link them so that they gain consciousness and they know that we will make an interesting environmental impact. And letting them know that, somehow, we will receive tribute. Let’s say, if there is something economical, because these small plots, are easily reached by the daily. If these raw materials were to bring them some royalties, at the end of the month, let’s say, 200, 1 000 pesos for having this. It could be an incentive. But first you have to work a lot on this point.

**That point being the providers.**

No, and because we start from there. It is the raw materials. For them not to throw it out. For them not to contaminate it. Because there are many useless people that throws that into the river and so… of course. They clean their yard but then they go and throw it away to become work for someone else. That happens a lot.

**Why do you consider these kinds of projects are important? What makes you think this is important?**

Nowadays, we are working on the environmental aspect. It is fundamental, the environmental aspect. People is not realizing that and we are finishing all of our resources.

**Do you by chance remember the name of that project in Nariño? Or I could maybe ask you…**

I think that… I think that… I have that in the company.

**Ok, please give me your number. Another question is, why aren’t there more projects like this one? Why do you think there are no other types of social initiatives for the utilization of that biomass? What could happen?**

I’m going to tell you something very reasonable and very simple. And it might sound cruel. It turns out that the ones governing are friends. I was raised with them and everything. But the ways of thinking are different. They don’t work for serving but for the money. Therefore, they are more interested in the projects where there is a big budget. The highways. And the highways are very important, particularly the tertiary ways, in order for us to get out our product. That is what we need to strength the most.

**Are the tertiary ones the ones for the rural towns?**

The ones for the rural towns. Going up to the plot, arriving from the municipality to the plots. And that is where we have it the hardest. Because the roads get complicated during winter. Therefore, it is hard to reach technology, because I would like t acquire machinery but then how do we get that there. We have to knock down half a ravine, we have to install poles and so… That’s the first thing. And secondly, they don’t invest a lot in those roads because, in their logic, a large one generates more money, where level six residential sets circulate through. All of these things. The budgets get inflated to 5 000, 10 000 million and what they really apply are 3 000. All of these things are what have led us to be where we are.

**If this chain were to be formed, what threats, what risks, can you identify that could affect it?**

I see more positive things rather risks. I see very few risks. Yes.

**Could this threaten the current existing value chain? Do you think it complements it? Does it threaten it?**

No. It improves it. I think it improves it.

**It would improve it? And regarding the idea, what do you think? What could you add?**

So cool. I like the idea a lot.

**Given that you know so much about coffee…**

Can I take a picture of this? To show it to my partners?

**Sure! I can send it to you. I will send it to you. We are going to do an event, on the 28th at the university, to identify actors and your participation would be very helpful for us because you are a producer but you have experience in this sort of thins and that is amazing. I can send it to you and otherwise there is no issue.**

This is a map of identified actors with how much power and interest they might have in participating in this type of initiatives. So, we have the national government, the departmental government, the municipal, the maritime industry, the communication platforms, transport, biomass collectors, the academia, coffee farmers… Oh, this one is the cocoa one. Coffee farmers, the coffee growers’ federation, here. Cenicafé, biorefineries, cooperatives and providers of technology, right? Based on what you know about coffee, who would be missing here that participates in that chain?

No, I think everyone is here?

**Everyone is there? Maybe people you know that is involved in the world of coffee.**

Yeah, because technology providers are here. Because this needs technology. We need to look into an easy process, for example, for that recollection. For it ot have the hoppers. For the truck just to come and collect and done. In a minute. For it to be able to be done with one person. So it doesn’t require 2 or 3. Just one person goes and ready. The thing is, I tell you again, I see the problem in the transporting. For example, to get there, the guy has to get there with a small truck that will lack the hook to pull that. Instead, with shovels. That is something that you have to take into account.

**Ah, yes. That is very important. Would you maybe move any of them? Or do you think they are properly located? Any with more power or less interest?**

I don’t know how much the government might be interested in this. Usually, government has the agricultural secretary. The projects, most of the projects, fail because they start very well but the projects require to have an equilibrium through time. Let me give you and example. I might have the plot. But in the plot, they might tell me “we are going to give a benefit for you to get 200 coffee plants”. And I sow the 200 coffee plants. They gave me the seeds for free and gave me the fertilizer for the first 6 months. I plant them myself and such. But it turns out that coffee won’t produce anything until passing 2 years. So, what happens after those 6 months? There is no money flow. Because there is no source for it. But I need to feed that plant. And it turns out that 3-months old plant consumed 50 grams. But the larger, more grams. And so son, I spend more in fertilizers. But I don’t have money flow. And so, the projects fail like that.

**There is no continuity.**

Secondly, there is an issue with the agricultural bank. The government’s bank. It should be called the most powerful bank in Colombia, because it belongs to the government, where they should have the best rates and the best benefits. I’m not saying they don’t. They do but, sometimes, they don’t take into account failure. And the thing is, around these times, it is a failure for us.

**With these rains?**

Of course.

**Why?**

Let me explain you. It turns out that… There is budding and then there is a nasty gale. It got lost. So, if I was calculating to obtain 150 coffee sacks but turns out that these rains have delayed me, they stop budding, it delays the maturation time. So I won’t get 150 but only 110 and in those 110 I won’t have the best quality but the quality will be gone. With that quality I’m left with almost 90. Meaning that those 20 are left there and because those 20 I don’t make it to my balance point. I end up losing. Why? Because I have to pay interests on the money they lent me. And since I’m given 6 months, I pay a high rate during these six months. It turns out that I capitalized 30 million pesos but the quota is 28, so at the end I am left with nothing to eat and I have to get into debt once again. That happens in all of these processes. I haven’t suffered of it because I don’t live out of it. But I’ve seen how my neighbors go through jobs or getting out there quickly “brother, I produced this coffee. I’m quickly taking it to the federation to sell it. No matter what they give me because I need to pay, I need to credit back…” and as such, they end up losing their product.

**Is there anything you want to add?**

No, no. The project is very interesting. I’m very interested on you working on this social aspect, which is where the raw material is and where there might be some incentive for these small producers, who are the ones that most likely could be participants in this. Given that they are the ones that contaminate the most because they are ignorant of many things.

**Mauricio, thank you so much.**

**END PART II**

**Your phone number, what is it?**

313 646 5226.

**Done. Let me save it. 313 646 5226. Oh, Mauricio, could you generate a space to meet up with the technical component of the project?**

Yes, sure.

**Knowing that you have so many contacts.**

Yes. You call me and…

**The project was in Nariño but how long ago was that project?**

Uh, about three years ago.

**And do you know if it kept working?**

I think so. I don’t go much to that region since it is a very delicate region in terms of safety.