**T1 - Interview Chipping and transport company Mengibar – 17-11-2021**

**Could you introduce yourself and the company?**

We start in the harvest season, we collect the leaves. We treat them here and bring it to the factory, after the harvest, we collect the pruning waste. The pruning is put in lanes between the olive trees and the machine goes into the field to chop it and immediately carry it out of the field. When the machine is full, we put it in a trailer or in the truck and we take it here. And here, we chip it again with a bigger machine, to make smaller pieces, about 1-2 cm. From the field, they are about 5 cm big, and here 1-2 cm. We need to make them smaller, to send them to the factory, that produces energy from it.

**Ok and which part of the pruning waste do you chop and take out of the field?**

Not everything, only the branches, the smaller pieces, smaller that my arms. Those pieces that are bigger, that will need to be processed by another machine.

**In this area, how many farmers do you have as clients?**

I work in Mengibar, Villagordo, Jabalcinco, La Infanta, everything in a circle of 20-30 km, and who is interested.

**And how many are they?**

It depends, there are fields with 20.000 olive trees, others with 10.000, others with less. About 80-90 clients. But until now, not a lot of people know this system, this possibility. Or they burn it, or they chip it and leave it on the fields, for the purpose of ecology. So it also brings back nutrients into the soil. But there are also studies that show that when an olive tree has a disease, and you chip that and leave on the soil, it could create fungus, so it is better to take it out, to leave the soil clean. We take everything. We prevent from diseases to spread on the field. A lot of people think that leaving it on the field is better and richer for the soil, but that is not the case.

**So, what do the people do with the larger pieces of wood?**

Well, the people use it for their own consumption, or there are companies that come and get it, that use it for the barbecue and things like that.

**And the people that use the larger pieces of wood for their own consumption, how do they get it out of the field?**

They take it out themselves, with trucks of with cars. The larger companies, they cut it into smaller pieces with chain saw and there is another company that is dedicated to that, to use it for the beaches, the fire place and the barbecues.

**But the farmers bring the wood themselves to one place?**

Yes, they divide it in the field, one part goes to one place and another part goes to another place.

**And we also understood that the CAP has set some rules, that the farmers should leave cover crops in the field. So how do the farmers that ask you to pick all the pruning waste?**

I don’t know what to say to you, everybody does it in their own way. Not every field and terrain is the same, everyone does things differently. The farmers should inform you. Some farmers leave the weed, others move the soil/plow and some use liquids. But that is all very controlled, they take notes about how many they put on the soil. But that is something the farmers should tell you, I cannot tell you that.

**And do you also do the pruning?**

No that is done by people who are trained to do that. Some people are well prepared for it, and already do it for years, or some people, mostly younger people, do courses to learn that. Others that are older, they learned it from their parents and grandparents.

They are called ‘*cortadores’* or ‘*podadores’.*

They will go to the field, they prune the tree and leave it on the soil. Then, another person will come and take out the bigger wood and the rest they put in lanes between the trees, so the tractors can go through.

**And these are all different people that do this?**

Yes, there are many people that are dedicated to this. Those farmers that have just a few hectares, they do it themselves often, but those with larger plots, they hire people to do it.

But it also depends on what the owner wants, also sometimes those people that do the pruning, they also take the wood. It depends on what the owner wants and tells them to do.

**So the *cortadores* sometimes also take the wood?**

No, they only prune it and leave it on the field. After that, people come and take away the bigger pieces of wood and put the pruning rests in a lane and them I come and pick it up. These are 3 steps.

**And do you have work all year round?**

No, we start in October with collecting the leaves, until February. Then in February/March, we start with the pruning rests, until april/may, depending on the climate. If it rains, it takes longer, if it rains less, it takes less time.

**And what do you do the rest of the year/?**

Because I have trucks, I work on the field. Or I clean the fields, and remove the olive trees that are dry and have diseases, I remove them and also chop them and chip them and send it to the company in Linares.

**So you work here with the 2 of you?**

No we also have 1 employee. She is working in the office, doing administration and I work with the machines. It is a family business.

**And during the pruning for example, do you employ more people?**

Yes, about 2 or 3 people. One that will transport it to the factory and one that does the chopping/chipping in the fields.

**And how much time does it take to clean a field of 1 hectares, is that something you could say?**

Less than one hour per hectare, but it depends also on how much pruning there is, which differs every time. About 35-40 minutes per hectare.

**And do you pay the farmers for this material?**

The farmers pay for the transport, to take it from the field to here. That could be 30-35 euros per hectare, depends on how much pruning there is. We don’t charge them for the chipping. But for the transport yes. If the farmer could bring it themselves, then we wouldn’t charge them.

**Ok so the farmers pay for the transport themselves?**

Yes, or they do it themselves with their machines. But what I do, they pay for.

**After that, you sell the biomass to the company. And which price do you receive for that?**

It depends, it is not a stable price, it depends on the humidity. They have a table of prices, dependent on the humidity, they pay you a certain price. But this also differs per year.

**And how much is that approximately?**

What to say, I don’t know what to answer, it is not stable. Because we haven’t brought it yet this year, but they have a table with prices. I don’t know how it will be this year, it changes every year. First they take a sample and then they look at the humidity, and then decide the price. I don’t know exactly.

**For example last year, how was the price then?**

It was bad, the humidity was very high. It didn’t rain a lot, but there was a lot of humidity. I left it for a while, to dry it, but then you lose kilos as well. The quality is higher, but the quantity is less. It had a price of about 30 euros/28/26 per tonne. But in every truck, the price can differ.

**And from the 30 euros you receive, for example, you pay anything to the farmers?**

No that is not possible, there isn’t anything left. The transport ‘eats’ almost all the money we earn.

**Ok, so the farmers pay for the transport?**

No, they are responsible for the transport from the field to here, that is what they pay for. We pay for the transport from here to the factory and the costs of the machines. That is also why not a lot of people do this work, here in this region, I am the only one who does it. Because I have all the machines and equipment, I do everything myself, but if you don’t have the machines, you need to hire someone to do the transport, that is not viable. They don’t pay sufficient to pay for all the costs. And we also don’t receive any help from the government, it’s not that they say that because we work on recycling, and making it more sustainable, they support us, no.

**What are the costs that you have?**

Diesel and maintenance of the machines, the machines get affected by all the pieces of wood, so they need a lot of maintenance. The machines suffer a lot.

**And for example from these 30 euros that you receive for the biomass, how much is left for you, what is your profit?**

About 10%, the rest is all costs.

**How much does the transport cost?**

We cannot say that, it is difficult to say that exactly, because the costs also differ, some day we work more than others. I can’t give you an exact number.

**And for example, how often do you refuel?**

That also depends on the work we do, this machine (chipping from field) could use about 200 liters of diesel per day of work.

**How much diesel do you use per kilometre?**

It is difficult, I don’t know, I only refuel when I am on the road and see that I am running low. I couldn’t tell you this.

**So the farmers don’t earn money with this, do you know why they let you take the pruning rests out of the field?**

They benefit in the bigger picture, they don’t have to burn it, if they need to chip it and leave it on the field, they need to pay for that. My system is cheaper. Transport the material of 1 hectare is cheaper than to chop 1 hectare and leave it on the soil.

**Ok, do you know the costs of that?**

For one hectare, they can charge you 50 or 60 euros. And to transport 1 hectare to this place, that will cost you 30 euros. So that is a cheaper option. With my company, the farmer earns.

*A truck enters their terrain full of leaves*

**Is this a farmer that brings the leaves?**

No this is my truck, a farmer doesn’t have this equipment, this is a service that I offer.

**And what do you do with the leaves?**

We also chip that and bring it to the factory.

**Do these truck come here every day, in this time a year?**

During the harvest yes. We collect them from different points, from different mills and cooperatives. The leaves come from the cooperatives, and they also pay for the transport.

**And you work together with different cooperatives here in the area?**

Yes, we work with about 8 – 10 cooperatives.

**What is the price you receive for the leaves?**

That is much lower, in order to earn anything with it, you need to have a large volume and bring as much as possible in one truck. We also need to chip them with our machine and then bring it to the factory.

**What volume of leaves and of pruning rests do you process here?**

The leaves, about 2 million kilos per year and the pruning rests, between 2.8 and 2.9 million kilos, we processed last year.

**And what is the volume that comes from 1 hectare?**

It depends, 1 hectare could give about 2 or 3 tonne, but not more than 3 tonne. That should be a big pruning.

**These 3 tonnes include also the bigger trunks?**

No, only the smaller parts. With the bigger trunks of wood, that could add about 1 or 2 tonne per hectare. It is difficult to say exactly. It depends per tree and per year. It also depends on the age of the olive tree, if it’s an olive tree of over 100 years old, it produces more pruning rests than a tree of 40-50 years old.

**And that is every years or every two years?**

Every two years. What is pruned this year, that part won’t be pruned next year.

**Do you also know the amount of energy that is used in that machine (the chipping machine to cut it into smaller pieces at their terrain)?**

Diesel, it costs a lot, but I can’t say. Sometimes I work 2 hours, sometimes more, sometimes 10 minutes. I can’t tell you.

**So the machine you use to chop the pruning rests in the field is different from the machines that also chop the pruning rests and leave it on the field?**

Yes it is different, this machine chops it and stores it directly, the other machine chops it and spreads it on the field.

**And so you have one employee here, could you tell is what his salary is?**

I pay him according to the law, as truck driver, for 8 hours a day. About 1400 euro per month.

**And how many workers do you need for a field of about 100 hectares, is that something you could tell us?**

I can’t say that, it depends on the time we have to do it. If we have less time, we need more people, sometimes we do it with 4 or 5 people, but also sometimes with 2. It is difficult to say that.

***I am showing the Biohub infographic***

**Do you see a role for your company in this system?**

You cannot transport the pruning rests directly from the field to the factory, there needs to be a step in the middle. You need to treat it, but this system of recuperation is not viable. You need an intermediate to treat it first, like us.

**And is that something you would be interested in?**

Yes, we could do it. We are intermediate.

**Do you think the farmers will be open do provide their biomass?**

The topic of ecology here is not something people are thinking of. Here, people are not interested in it. People are used to it that they chip the pruning rests and leave it on the soil, it costs more, but they are used to it, so they like to do it like that. But there are also others that are open to it, it depends on every farmer, you should talk to them.

**What do you see as the main challenges in this sector and in you work?**

The costs, the price of diesel, you cannot continue like this. The material we work in, is for energy, but it is too costly. It is possible to earn more money to invest in the machines. We don’t receive any help.

*After the interview, they show us the machines. Also they tell that they need to clean the biomass before they take it to the factory, because otherwise they receive a fine. So they remove the stones/pieces of plastic/dirt.*