**FU1 - Interview president farmers union 25-11-2021**

**To start, could you introduce [NAME] and yourself?**

Well you know what [NAME] is, but I will try to summarize it. It is a professional agrarian organization of grouped farmers here in Jaén, mainly from the olive grove but also livestock and forestry. We do a very wide range of services for our farmers. We make lots of things, starting with grant processing. We process thousands of grants through this organization, from this office and the 40 offices that we have in the province of Jaen. Apart from that, we also broadcast all the concerns of olive farmers and other farmers. Because our role is mainly to transmit information. Above all giving the farmer and olive growers all the information concerning the crop and cultivation and what European, national and Andalusian and provincial regulations may affect it. I guess that what is interesting for the interview is what we are doing in [NAME] regarding the issue of by-products. It is true that we do it in an indirect way. Because what all companies normally do is to contact us before. Usually we are the most concerned with the cultivation of the olives. We made a precision agriculture operative group in the Olive grove with drones. Now we work together with the university, participating also to do it via satellite, because the images are easier to interpret. It can be used to aid phytosanitary treatment, or the addition of fertilizer and nutrient deficiency risk, and humidity of biomass. Biomass has, as you can see there, two piles in the olive grove. This can be leaves and wood, waste pruning or harvesting and the by-products that are generated later at the time of delivering the olives at the cooperative. Regarding the first, we have been trying for a long time to valorize the pruning remains, but so far I do not know if it is going to continue. I know they normally chip and leave the remains in the field to make organic matter. That also works as an inert cover in the olive grove. Usually that is what is done right now with the pruning waste. There is another sector that we are also investigating. What is it what you could do? It has several aspects, it has one small benefit in terms of compost. There is a part that goes to organic compost, very little compost. The rest is usually separated in olive pits and the pulp fraction. The pits have a high energy value that is used directly for heating. That's what we normally do. The last thing that is being investigated is to have a service for biomass with all the pruning waste of the forest. To indicate that it does not differ from other organic raw materials to use it in chemical and thermal processes. Also it can make black bio chips, take a look at what I'm talking about. So research is already being done in this field not only to use it as energy. I have also signed a conceptual document with a company that I cannot elaborate more on than what I'm going to tell you. The goal is to try to get organic nitrogen to see what comes out. That's the last thing we are doing. But of course, I cannot elaborate on that topic any more because we are going to collaborate in another operative group with a series of companies. I have already signed a document with some ideas, But no, I should not elaborate on that, we signed it recently.

**In what way is [NAME] involved in projects like this?**

Usually we are trying to make a cooperating group at Andalusian level. A group where the University takes part, I will try to involve the actors who can play a role. We were the leader of that project that I pointed out to you before and now we will also try to lead it. For the research that we want to develop it is not only for energy use, it has two aspects. It can be used of course, to generate power. That is very advanced, it is studied a lot. I can give you many publications on a lot of subjects that is well studied. It is all about thermal energy, that's already done, but that's not having what we want to investigate.

**How many partners have [NAME] in Jaén?**

In Jaén? We here have 10,000 members that want some help. That accounts for almost 45 percent of all olive grove surface of the province. Anyway, I was very involved in the primary and secondary sector, in the cooperatives and oil mills. Of course, the subject of by-products always comes to us because we are the ones in contact with the farmer. Yes, above all on the subject of pruning. The farmers asks us a lot, constantly, research to see if it's really worth it or not. I mean, with the pruning waste there is a very serious problem. This is that when you prune, a moth pest can destroy the trees in a very short time short of time. Of course the biomass that is generated from the pruning remains is generated in two months. Yes, but there is no structure that is able to absorb all the pruning waste of the olive grove because it is so much. There are 66 million olive trees, almost 660 thousand hectares of olive groves together and that generates such a quantity of biomass that we are unable to handle it. By making a utility that picks it up, that's how we handle it by picking on site. We spend time looking to see if apart from chipping something would have a higher performance in terms of energy, including the use of the leaves for cattle. When the cleaned olive leafs are used as feed for cattle itis given some usefulness. But of course, we have not managed to give the profits to the farmer. They are left in the middle. Now the most interesting for him is that the leaves result in some compost over time, as it is vegetation cover. Right now that is what is being done. We have tried everything, even packaging the small branches, making them like straw bales and then everything. But the economics don't fit, the figures that come out and the machinery we need.

I believe that for me the main drawback is that I am telling you that in a very short time that we would have to manage a great mass. That great volume cannot be left in the field. You couldn't leave the waste on the field that is the problem. We could manage it all year round, but the legislation prevents that to avoid pests. If there are small amounts it can be managed. I'm talking about wood, firewood. They can handle that, but it is not profitable, the price for wood. Now you need to see it as a by-product, instead of being a residue, it can have high added value. Many plants at the time extract the oil from the pomace because there is an oil left and by extracting it with a chemical mechanism, traces of oil from pomace that they have left once it is processed, that is practically ready for commercialization. It is already very clean, separate the pulp from the pits and you get an organic matter that is very suitable for heating. And the pits can be consumed directly. So a solution is out there, if there is more capacity. What came to me from all the years that the pits are sold, everything is exported, but not there is no problem with that. The more important problem is what we do with the pruning waste of the olive tree, because so far I have not found the mechanism, the way to have another use for it. For other uses, that is energy, we have the figures on the machinery needed. There is a plant in the Baeza, there are several thermal biomass plants. The only thing I need to see is the price at the gate of the factory. Do you want me to give it? We know how to do everything else and we have machinery, we have equipment with the tractor that has the chipper. It would be relatively easy if it has a clear added value. But of course, if the price is not right it will not work. You give me the amount biomass needed at the factory at the gate and that can be matched. The main thing is, you have two months to prune so it will accumulate. It can be thrown away, but the farmer he complicates it, chips it, and leaves it in the field.

So far there are no mechanics, we are trying this with cooperatives. There are some cooperatives that are doing some trials that collect wood and take it to the cooperative in big trucks. The problem is the moth if you leave wood near an olive tree, that's tremendous. They force you to destroy the pruning waste within the deadline. You can bury it in the ground or burn it, take it, chip it. If you are obliged to do so within a period, you want to put it in a place where you never have to take it out.

**What is [NAME]'s role in this?**

The main one is being the catalyst. Interconect the farmers with companies and other sectors. Also the one we are forming now. This is a very short summary of what we did for two years. For some years we have been investigating how the sector evolved on the short and long term. That is Romero's long brochure, the brochures we made four years ago we did not start yet. Although the participant look at five stakeholders: [NAME] Andalusia, the Andalusian Federation of Spatial Development for men, La Caja Rural, a laboratory, and a reference at the University de Jaén that understands then. We were all year investigating the possibility of precision farming in the olive grove that had not yet been done for other crops. We were researching it for 2 years and that was positive. But of course, with this we can do the same. The idea we have to do the same, take a group of people and set up a task force to see how far you can get. For example, we signed the agreement of the countryside. We are an employer organization, we are within the Confederation of Entrepreneurs of Spain and Andalusia and of Jaén. We are members of the business organization. We are the party that signs the agreements with the labour unions, although we are also the ones who sign for the employer's to organize the works of the field. We do everything what I have told you about, help, training, we have a department for training. I enjoy this, we did several courses for drones. When we finished we did three or four courses because there was be a lack of people and we did that training for them. We also do insurance, agricultural insurance, general labor insurance. We bring the whole issue to big and small farmers in the fiscal field. We also have a legal advisers, we have two lawyers hired on staff to give legal advice. We do what he says a lot and he does not know [NAME]. We make a monthly magazine, that magazine here I give you one. We have appropriate followers to spread information, we have 18,000 followers. We have our own Typekit AS in Jaén for many years years. Before the news we had on agrarians was on one page. Our work is on an international level. We implement new technologies. We are trying to get farmers to join new technologies, which will be more used every day. Of course, this is a bit of what we do, it is summarized a little. But it is a lot of talking with governments as a representative. We are recognized as representatives of farmers by the entire administration at the national level, Andalusian, provincial, all of them.

**Is it a union especially for young people?**

It is how we started. The name originates because there was an agrarian organizationfor young farmers under 40 years of age. But with the time we merged with other organizations, with the UFA, Union of Agrarian Federations, and with the National Confederation of Farmers Rancher and [NAME] came out. We have a sector of [NAME] Joven for young people in Jaén, now they have approved aid for young people to join farming. A third of all the grants that have been given out in Andalusia we have done here in our technical department.

**What kind of help is it?**

It is good that when a young person wants to join doing agrarian activities, there is a line for competitive concurrence of the Andalusian Government through the PDR, through the Andalusian Rural Development Plan. Competitive Purrete ask you for a series of requirements and if you comply, they give you an OK, so that I can help you to start agricultural activity. It's the future of the field, we bet everything, we all contribute. If there is no new people, if there is no generational change, it is very difficult for this activity to continue. If there is a certainty, it is that people have left the field. They work very much. First of all because of the hardness that it is not a workweek, or not heated and air-conditioned, although tractors are already something else. But no, it didn't have the appeal, it is not attractive. It takes a lot of money because the land It is worth money and it is worth a lot to get hold of a farm. We are seeing that young people are looking for an opportunity again to work on the field. Before they did not want to do it either. And the towns, of course, have very limited people in terms of relationships, social networks and not so many new technologies. People are no longer so reluctant to live in a town and it is seen as an opportunity for people. College students who are disappointed with the labor market. And they're looking at farming as an option. We have had very bad years, nobody wanted to start farming. But the last years we are seeing that people are beginning to look again at the field as a possibility fro work, an option in life. Yes that's good.

**Do you help members with the CAP?**

Sure, we process what we process the CAP for 10,000 members. Yes, but those members are not small. Together they have almost 48 percent of the entire surface of the olive grove of the province of Jaén, almost 300 thousand hectares. Well those are the ones we influence, we have no incidence on that surface in the province. Then we have a livestock sector, a forestry sector, which is what we do.

**We understood that for the CAP it is mandatory to have vegetation cover, is that so?**

That is additional. Now we are in full negotiation for the CAP, although it is not yet finished. Now we are having problems something again. We have a problem in quota, to be able to fulfill it, which is what we call the green payment. That is what they say, the olive grove was compliant, but now we are closing the negotiation on burnin. This is a very important part of the grant that is linked to green cultivation techniques in the olive grove. We want to emphasize that the olive grove is a perfect CO2 sink. Are you going to pay for that function? Now I will explain myself. We are generating a CO2 sink to fix it to the ground through the olive trees, amazing. Yes, it is very important that tons of CO2 are fixed, but when they are am going to recognize this. Don't push me beyond what I can accomplish. And let me explain, we are negotiating to see what kind of agriculture can be designed to meet the goals. They are not interested in precision farming and that pissed me off. At what time Europe is going to recognize that precision agriculture it is the most respectful for the environment. Why? Because with the minimum input it gets the maximum output. That is, with the minimum input of a tractor I get the maximum production to feed Europe. A thing at national level that I recognized and removed, for example, has to do with ground cover. Until now I had one additional subsidy for vegetation cover, especially on slopes to avoid erosion. Now, we are trying to make it a possible theme is for the entire country. We are still negotiating those issues. We are not going to close them yet. It is going to close now in December with the Ministry. For European regulations we know already how to avoid it in some areas for certain type of scheme very easily. For us, having permanent crops, it will be a lot more work. In about two years we will be able to do it differently, we will see how they are going to do it. You cannot put something else on the olive groves, the olive trees from one year to the next are permanent crops.

**It is not mandatory to have vegetation cover?**

In December, we are closing it now, that's for the future. Of course, for the next CAP that will be enforced in 2023. The transitory years 21, 22, and in 2023 we enter the new covenant. We are closing the negotiations of the future CAP on the 27th. It is getting greener and greener, which seems good. But then, as I say, it is not the same bureaucrat in Brussels who is sitting in his office and has never seen an olive tree in his life. Later, when someone comes, they see the terrain yes, but not what we do here and the ways we want to work. I remember that for the other PAC you had to rotate crops such as olive or almond plantation. I understand that is what happens when a rule is extrapolated to our territory and what we do here. Agricultural organizations have representation in Brussels. We have representation in many places. Where we raise the problems we have here with the regulations. Well, we find out that this does not work here. We need to make them understand the olive grove. I imagine that for the people from the North they have not seen the olive tree in their life. They only know it from the Bible, they read that there came to the dove with an olive branch, that is the CAP’s symbol. That is all they know about the olive grove. But then we have to communicate to the rest of the people what is going on? The characteristics are quite peculiar for the Finnish people I imagine. I only know about their country what I have seen on television. I do not know what I would need to do. There will have to be someone who says hey, the rules need to have these qualities for the sheep here in the mountain so that it will suffice. That is not understood in Europe. Sure, we have a mountain that can have grass. But it is not understood,because they are thinking of spruce that is eaten by cattle. For the vast majority of plants in the Mediterranean area, there are many species that have specialized to eat them. But of course, in Europe it sounds strange to say how they are going to eat on the mountain, if the Mediterranean mountain has that characteristic. So that is what we normally try to transmit to Brussels, because there is no homogeneity. The Union is not homogeneous, the different zones have nothing to do with each other. So of course we have to try to solve that problem. I have given you put a bit of an extreme example that the other people from the forum gave us. Not we have to rotate crops in Spain in three steps, one uncultivated, one fallow, and one cultivated land. How do you do that with olives? What happened? They had to change the rule. The olive grove now complies with environmental measures. Me personally, I was a bit on the point that the necessary environmental measures should be applied. If they are inapplicable, we cannot do it.

**And for example, will the CAP include cover crops?**

I think that in the end it will be that you can have living or inert plant cover with pruning waste. The vegetation cover is a practice that is almost normative, as a usual way of cultivation. Regarding the vegetation cover with the olive tree, I I would dare to say that we do it at very high percentage, in a way natural. Without anyone having to tell us we are doing it because it is an application that works, that is favorable for the cultivation. Environmentally it is very good, because here we talk about the great forest. I always say that the province of Jaén is one large forest, the entire province. A part cultivated and another part without cultivation, but a whole forest.We cultivate a part of the land, not the part with the mountains where we cannot go. All over the surface except for the rivers and maybe another type of cultivation, fruit trees or cotton, is forest. The province is a wooded area that is not separated. I believe that has a very important environmental value. More important compared to other crops. This we are not able to highlight enough in Europe and everywhere. We create this, little trees that can be used to hide. On top of that we produce a very healthy food. Olive oil and the by-products products are used for heating. Other industries and other business do not have that. The data is expensive, but that is our job too. That we put in economic value what we have here. We have this value for us all. How do you recognize that? For example, I believe that with the cultivation of the olive tree and precision farming you can spend less inputs to get more food. That is very good. That needs to be fulfilled in all the European regulations, because in the end we have to eat and produce food. Yes the cultivation needs to be improved. I do not I know another way. Because we get an additional grant for doing organic farming. I am not asking for money in exchange for leaving me alone. I think it is simple. Everything that we want to do is tell this to Europe, to improve the world. The importance of social cultivation, environmental cultivation, generates an impressive amount of employment. With special growing conditions that other crops do not have.

**According to you, what are the challenges in the sector?**

A very serious challenge is being a successful crop. It has spread throughout the world by its successful cultivation. The problem is that the new plantations are more technological. They produce at a much lower cost than our traditional olive grove, where mechanisation is very difficult. If you can not compete with the harvester of the new plantations in one line. Yes, we have seen intensive and super intensive. Of course, they can get there with a tractor to power the work. In the traditional olive grove it is all manuel labour, using the vibrator to harvest the olives. For pruning you have to go with a chainsaw and with people chopping the branches in the center. The costs are much higher in traditional production that in the intensive and intensive olive groves. The intensive and super intensive are already beginning to make up almost 50 percent of all the oil produced in the world oil, forty-something, almost 50. We are only 30 percent of the olive grove surface left. It is a matter of time before we have to convert. It will take 15 years before we need to abandon the groves because there is a tremendous lack of competitiveness, an oil that can be produced at a euro less than a euro or a liter versus ours, which is a minimum, minimum 2 euro and a half. The cost of production is expensive and cannot compete. So, of course, that is the great challenge of the olive grove. This is our traditional stumble, competitive plantation development is already beginning to take root and people are reconverting, but that is another type of cultivation. For me the most serious problem is that many companies want you to pay when they remove the old olive trees. So, they did it for free before. They removed the olive tree and left the ground cleared to put another new plantation. And now they are already asking payment for that. Ok, now about the technical details on energy. Valorizing the wood is the most immediate challenge that there will be. The quantity of olive wood available each year is spectacular and because the price is a little high it account for the cost of oil.

**There are more and more people, who convert the olive grove?**

Sure. And the rest of the cereal crop that is not profitable. Sunflower is extensively cultivated in the world. The profitability of those crops is lower than the olive grove. So it is converted to an olive grove. I already told you, cultivation success is not helping the traditional areas, but gives difficulties. Yes, of course, intensive farming is a successful cultivation where profitability is higher than in any another product. So the investment companies are looking for land everywhere. The Chinese have already bought half of Africa and South America. I believe that investment in agriculture, large funds, have found a very important market niche in agriculture and especially in that kind of agriculture. I'm targeting you, yes, the industrial capital. The traditional olive grove no longer competes or costs a lot to compete. You only have two options. There will be areas that will be abandoned and areas that will be covered with intensive farming, old olive trees will be uprooted. The new olive groves can be mechanized. That's two options. I do not see another right now and this is on a short term, five, six, eight years. I don't see any other option. They have already begun to convert. And it took many years of warning that this is coming. It already begins. If you look at it, the people who had cereal had no olive trees, but there are a lot of farms that have already removed the old olive trees and have put intensive trees to mechanize the farm and intensify. It can be super Intensive or intensive, but the farmers want to achieve it.

**Ok, I want to show this picture, which is a biohub concept. Yes, there are different communities here that can provide biomass, such as pruning remains or alperujo for the production of marine biofuels. (showing the biohub infographic)**

Do you also include forestry?

**Yes that can also be the case.**

Right now the wood is increasing in price again. We are trying to switch from plastics to by biodegradable products. Now the cellulose pulp is taking a lot of importance worldwide and that makes it valuable. The value has risen a lot, and with that perhaps the exploitation of the wood. There are companies that dedicate land for the production of wood biomass. Okay, quite a few companies are dedicating themselves to that after the mountains were abandoned. So in the last years there has been some change in the market for wood, but globally it has low impact. I was targeting this a long time ago. Me I am from the area of ​​the Sierra Segura where it alternates or can alternate. In fact, the olive tree alternates with forest. For some highlands at some point I thought about the possibility of making energy crops plantations, thereby completing the cycle. The problem is the machines that you have to use. You cannot have them be idle for almost the whole year. Then you have to look where it is possible. Low, and the distances are very important. Yes, because you have to move the biomass for many kilometers. Biomass has a very serious problem, that you need to transport a lot of air. If you turn it into pellets, that is compact and the transport is economical. But when you have to transport branches, logs. Yeah that is expensive. So I think the most important thing today or at least very important is the distance. If I know where you have the plant. The distances depend on the type of plant, what you want to do depends on the size or really what you see that may interest you.

**And in the Sierra de Segura do people have energy crops?**

Well, for a long time. I saw this long ago. Of course, when the price of all those things falls, then when we return to other crops. Ok, especially from what I'm telling you, because the change of mindset, stopping using plastic in favor of recycled products, recyclables, wood takes an important part. Interest rises, as fuel, even for agricultural use. A study is staring that is trying to extract nitrogen from organic matter for agricultural use. Nitrogen from organic matter, not from chemical synthesis. Very interesting for fulfilling the regulations and to have better cultivation methods. But we need to produce, because the people need to eat at minimum 3 times a day. And I always say that the farmers need to contaminate less, because of the product they make. But there is always an image of farmers that they contaminate, because of the chemicals they use. But the ones that are really contaminating are the ships and the plains, which is on a much larger scale than agriculture.

But this will be very interesting (Biohub), but it depends a lot on the size and of which feedstock you will use. The main problem is the logistics, if you need to transport far or close. And if you can transport the biomass in a compact way, because otherwise you are transporting air, and that is always expensive. But it will be interesting to make most value out of the products.

These things are always good, I think this is sustainable. And you will have a constant supply of biomass, this is generated every year. If it will be valorized or not, that is another thing. Now, it doesn’t have value, also not the forest residues. They are now residues, not subproducts.

**And what benefits could this generate for the sector or the region?**

We have a residue now, if you can convert it to a subproduct of value, that will be beneficial. It is a economic benefit. If it doesn’t have an economic benefit, it won’t work. We are always looking how we can valorize it. If you can earn income from biomass, that will be crucial. And that is the most complicated part. If we can decrease the costs here, or increase the price, we solved it. Because we have enough biomass, the whole province of Jaen, from olives and also the forests.

**And do you think it can also harm or interrupt an existing system?**

No, because it doesn’t exist yet. Well, the alperujo and the olive stones yes, that is already sold, but the pruning rests not.

**And finally we want to understand the actors and relations between the actors (showing power-interest grid). How do you see the position of these actors?**

How to tell you, the power position of the farmer is low. Because we haven’t been able to valorize the product, it is a residue currently. The position could be very high, because they own the primary material, but currenly this is not the case. It is low because they cannot valorize. The olive mill yes, because they can process it and put it on the market. Orujo is already a subproduct, not a residue, it already has value. But the farmers need to pay money to get rid of the pruning rests, it is a residue, waste.

**And do you think the interest of the farmers is high?**

Yes, every way to provide added value for our exploitation is welcome.

**And how do you see the government?**

Everyone has interest because of the energy crisis. But currently they are much more interested in solar power and wind power than in biomass. Because, I think it is much more easy, you don’t need to convince that much people. To use the biomass, that has more costs and is more inconvenient to use.

But we also lack good infrastructure, energy infrastructure. All the biomass that we have, we cannot convert into electricity because the net cannot handle that. But the government doesn’t see that as infrastructure. We need that electricity infrastructure that currently doesn’t exist. We have a high potential of biomass, but where do we leave the electricity? The government is not interested in this topic.

**And also the provincial or regional government?**

No, when you talk about electricity net, they don’t understand, don’t think it’s necessary. I think it is the case for all governments, they are not that interested in energy from biomass, because solar panels are much easier.

**And where would you put [NAME] in this table?**

In biomass collectors, I would put us there, and also as communication platform.

**And in relation to the interst and power you would have in a project like this?**

High, very high. Both in interest and power. I would be complying with my responsibility. If you can find a solution for our biomass, great, where can we sign. And we can also communicate about it. We are both high in biomass collectors and in communication platform, we are both. We can communicate this to our members, we can organize reunions. Up until there, we have power, what the farmers then decide for themselves, that is out of our hands.

***He is willing to participate in the workshop: mail address:*** [***lcvalero@[name]jaen.com***](mailto:lcvalero@asajajaen.com)