WP3 – Testing

Task 3.1.2 Interactive International Seminar

Complete Deliverable

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Introduction

The Interactive International Seminar is part of of WP3, the core and main challenge of Reinwaste project. Its overall aim is to foster the effective technology transfer, by a collaborative&open innovation approach, among agrofood clusters, R&D centres and agriculture and agrofood companies from the regions involved in Reinwaste (Emilia-Romagna, Andalucia, PACA).

In WP3, innovative and R&D-based solutions will be introduced to remanufacture the food supply chain thanks to waste prevention by ecodesign, the testing of innovative components and materials to reduce the inorganic waste, both on the agricultural and food transformation phases and the introduction of strategies for the smart inorganic waste management. S3 managers and value chain experts are the main target stakeholder for the Interactive International Seminar.

The Interactive International Seminar lays the basis for Reinwaste legitimation by S3 managers in the three Regions, Andalucia (ES), PACA (FR) and Emilia-Romagna (IT) and creates the preconditions to increase the efficient uptake of Reinwaste activities and results within the policy landscape as well as within the considered value chains.

The Interactive International Seminar aims were defined in agreement with the project partners as the following:

- Legitimate Reinwaste project by S3 managers, in particular by connecting the project objectives with current S3 strategies;
- Gather inputs on how the project can be useful to strengthen and implement the S3 strategies of the different regions;
- Collect specific needs and assess current challenges from stakeholders representing the supply chains of interest.

In order to maximize the outcomes, it has been decided to held the Interactive International Seminar inviting both representatives of the S3 managers as well as supply chains experts at the same discussion table.

Methodology: focus group discussion

The Interactive International Seminar methodology was developed by ASTER and shared with all Reinwaste partners involved in WP3. The chosen methodology has been the focus group discussion. Focus group discussion is frequently used as a qualitative approach to gain an in-depth understanding of specific issues. The method aims to obtain information from a purposely selected group of individuals.

The focus group methodology was chosen the focus group was organized around a series of questions to be posed to S3 managers or representative companies. Aim of the questions was to collect available expertise and views on the topics of Reinwaste, specifically on how Reinwaste can be beneficial to regional challenges.

The questions below were intented for RIS S3 experts:

- Express your view on sustainability in terms of reduction of waste production focusing on inorganic waste (such as packaging, mulching films, etc.). Is it is defined amongst the priorities of the regional S3 for the agrofood sector? Is it covered by specific programmes at regional level?
- Discuss about the state-of-the-art, at Regional level, of available supporting measures for the reduction of inorganic waste (such as packaging or else, e.g. mulching films) along the agrifood supply chain. In case of lack of measures discuss how to implement new action on this topic and then revise the future RIS3 strategy.
- Discuss how the circular economy regulation(s) could match in the next future in concrete ways of application on the regional RIS3 policies (with a specific focus on inorganic waste reduction/prevention)
- Are you aware of bioeconomy opportunities? In case of affirmative answer, please indicate which substitutions can be done in your sector by using bioproducts or biomaterials. Which is the level of implementation of this solutions in your sector (dairy, meat, horticulture)? Have you already used some of them? Why/Why not?

As technical experts, Cluster Manager, Companies or other relevant stakeholders with detailed knowledge of the supply chain were involved and asked the following questions:

- What do you consider as main source of waste within the inorganic waste fraction in your supply chain (horticultural, meat and dairy) and how is it currently managed?
- Are there data about the amounts and types of inorganic waste production connected to the agrofood value chain in your region?
- Eco-design, prevention and reduction of inorganic waste: considering your specific supply chain of interest which are the main technological challenges to overcome? Are there non-technological barriers?
- Already existing best available technologies on inorganic waste reduction: are you aware of them in relation with the supply chains identified in REINWASTE (dairy, horticulture and meat)?

•Lack of interest from the agrifood operators to fully consider the opportunities coming from “innovation” about inorganic waste: which are the main reasons which affect them in terms of trust?

• Are you aware of bioeconomy opportunities? In case of affirmative answer, please indicate which substitutions can be done in your sector by using bioproducts or biomaterials. Which is the level of implementation of this solutions in your sector (dairy, meat, horticulture)? Have you already use some of them? Why/Why not?

Additionally, general statements to be considered in the discussion were provided to the experts:

- Plastic packaging as a strategic tool for reducing food waste and for a sustainable, healthy and optimized consumption of food
- Recycling and energy recovery, country focus and perspectives
- Packaging, food waste and environmental protection: the challenge
- Active, intelligent and biodegradable packaging active in the supply chains considered
- The packaging that will come: innovative solutions and challenges for the near future.

Conclusions

Three Interactive Interregional Seminars were held:

1) June 7th, 2018 in Bologna involving all partners and their invited experts via webconference (see attached report and signature sheet)
2) June 20th, 2018 in Almeria, with lead partner AGAPA, IFAPA, COEXPHAL focused on the horticultural value chain (see attached report and signature sheet)
3) July 18th, 2018 in Marseille, with CRITT and PACA Region representatives focused on the meat value chain (see attached report and signature sheet).

The main conclusions are deriving from the shared discussion in Bologna during which all value chains were discussed at the same table, integrated with the additional meetings held locally in Marseille and Almeria.

Regional S3 strategies do include sustainability aspects in the three regions. Nevertheless the precise quantitative knowledge on the amounts of inorganic waste deriving from the food sector is not available in all regions.

When comparing possible solutions, it appeared that bioeconomy is the key solution to lower the impact of the three value chains in order to reduce the impact of inorganic waste in these sectors. It is fundamental that tailor made materials are developed, together with the companies, in order to allow them to progressively reduce their inorganic waste fraction production. This may have more challenging demands in one value chain compared to the others (e.g. meat value chain and horticultural) as not always suitable materials are at appropriate stage of technological development.

At the same time, the sector experts highlighted many non-technological barriers such as standardization, the economic sustainability of switching to bioeconomy. These aspects will need to be addressed collectively in order to move to a sustainable zero inorganic waste food sector, also by coordinating with other European funded initiatives.

Annex 1: Report of the Seminar held in Bologna, 6/06/2018

Participants

ORGANIZATION	NAME AND SURNAME	COUNTRY	ROLE
AGAPA	Mariana Lorbach	SPAIN	Project leader
Agencia IDEA	Manuel Arroyo	SPAIN	S3 Manager
Aster S.Cons.p.A	Maria Grazia Zucchini	ITALY	Project partner
Aster S.Cons.p.A	Daniela Sani	ITALY	Focus group facilitator
Aster S.Cons.p.A	Sara Picone	ITALY	Project partner
Aster S.Cons.p.A	Sofia Miceli	ITALY	Project partner
SOCIETA' AGRICOLA FRATELLI TONOLI	Giulia Tonoli	ITALY	Dairy sector representative
CLUSTER Agrifood (Emilia Romagna Region)	Marco Foschini	ITALY	S3 Manager
CLUSTER ESS (Emilia Romagna Region)	Katia Ferrari	ITALY	S3 Manager
CRITT Agroalimentaire PACA	DELOCHE Yvan	FRANCE	Region representative
Emilia Romagna Region	Silvano Bertini	ITALY	S3 Authority
Federalimentare Servizi srl	Maurizio Notarfonso	ITALY	WP3 Leader
Granarolo Spa	Angelo Vittorio Zambrini	ITALY	Dairy sector representative
Sepe - Confagricoltura	Daniele Mezzogori	ITALY	Project partner
Sepe - Confagricoltura	Gloria Chiappini	ITALY	Project partner
Tragsatec (Technical Consultant CAPDER)	María del Sol Cuenca Martín	SPAIN	Horticultural Expert

Focus group discussion

The Focus group was opened by Dr. Silvano Bertini, Head of Economic Development Policies Unit at Emilia-Romagna Region, responsible for S3 Strategy.

The focus of Reinwaste, according to Silvano Bertini, involves many priorities identified within the regional S3 of Emilia-Romagna, firstly within the Agrifood Clust-ER but also in the Mechanical Clust-ER. The issue of "plastic" is high in the discussion agenda of the region, also because circular economy has the potential to develop new value chains and increase the value of existing value chains. Innovation with a circular economy approach can generate very high added value for the value chain itself, therefore for Emilia-Romagna as a Region this is a very relevant priority. He introduced afterwards the two Agrifood Clust-ER and Energy and Sustainable Development Clust-ER manager Marco Foschini and Katia Ferrari, who are going to follow the meeting as representatives of the S3 manager for Emilia-Romagna.

Maurizio Notarfonso gave then a presentation on Reinwaste project and its objectives in order to set the floor for the upcoming discussion.

Daniela Sani introduced the focus group methodology. The discussion proceeded on two parallel lines: the policy aspect and the technical aspects in order to provide input on both aspects for Reinwaste project development. The S3 managers were interviewed first, so as to explore the policy relevance of Reinwaste project.

1) Are the themes of Reinwaste (i.e. the three value chains -horticultural, dairy and meat- and the thematic keywords like circular economy, zero waste) already included in the priorities of the region your S3? Is any financial support included in the S3 or in other financing programmes?

Manuel Arroyo for Andalucia: our regional S3 contains a priority related to agrofood, where you can see some lines of actions related to waste recycling and treatment. This means these topics are included but not in a specific way. Mostly we have grants for R&D projects submitted by companies, those connected to S3 receive priority funding.

Daniela Sani explains that in Emilia-Romagna the Clust-ER managers can be considered as well S3 managers as they were leading the process of review of S3 which took place between march and may 2018. Marco Foschini, confirms that within S3 strategy of Emilia-Romagna there is high space given to circular economy. All these 3 sectors (horticultural, dairy and meat) are covered. Nevertheless, the theme is relevant as the use of plastic material is high in all these value chains: as an example, 1 ha of horticultural production in the field leads to 130 kg plastic, 30 kg of irrigation pipes. There is a percentage of this material which is reused but it needs to be improved, also from the point of view of economic sustainability. The Clust-ER can contribute with data and best practices also for inorganic waste even though their main interest is organic waste.

Daniela Sani asks wether the issue of inorganic waste is included more in the sustainability aspects of the whole sector.

From the point of view of the Green Tech ClustER this material flow is certainly included. Within the 6 strategic goals identified with the S3 revision process, one of them refers to circular economy in all waste sectors, not only waste but all resources. This priority includes industrial symbiosis, and how to reduce waste production by providing an integrated vision of the problem including reverse logistics and business models. As for organic waste, energy production (biomethane) is also one of the priorities included. For inorganic materials and mostly plastic, another priority relates to the marine litter issue and the spreading of plastic in the marine environment. So the S3 priorities for our Clust-ER have an integrated view of the issue.

In France a special focus was put on food waste including producers, retailers, consumers

Daniela Sani comments that from this first round of questions, it seems that currently the topic of inorganic waste within the agrofood sector is lacking in the S3 strategies.

According to Manuel Arroyo, maybe some producers use the solutions that the providers give them and do not go beyond state of the art. The project results need to be very well communicated. Policy makers and the general public need to know the results of the project so that they can be included in the new S3.

Next question for Marco Foschini is whether the inorganic waste or the concept of zero inorganic waste in the agrofood sector is an issue only for these value chains or is it relevant also for other agrofood value chains.

Foschini: the issue of inorganic waste is a cross-cutting issue, and an environmental priority. There is a need for a public private collaboration in order to facilitate the application and commercial use of new technologies in order to allow economic sustainability and possibility for the market to make use of innovative technologies and products. Economic sustainability is an issue in order to transfer the technologies for industrial uptake.

Following question is for the Energy and Sustainable Development Clust-ER: are we going to apply the Circular Economy action plan in an environmentally sound way?
According to Katia Ferrari, the first necessary step is a study about the quantities and fractions of inorganic waste produced in the region. Knowledge is necessary to understand the size and type of the problem, starting from that reducing waste, improve collection, increase reuse. According to life clycle thinking we first need to reduce the input of raw materials, so it is important to focus on ecodesign. Each solution is good only when it is locally sound, i.e. it depends on the local waste management system, tools to do that: waste management plan and before doing that realized a LCA study, as it was adopted in ER Waste Management Plan. Adjust the approach then for each value chain.

For the food companies, inorganic waste is a big issue because a big portion of food waste is packaging waste. Although the amount of waste is limited they are difficult to be treated (for example because they are dirty) Companies are already looking for solutions to reduce this problem.

Then the discussion moves to the experts of each sector. First question is what kind of inorganic waste characterizes each sector.
Vittorio Zambrini for Granarolo: most of the inorganic waste, provided that the industry has taken into account the problem, there is no landfill, try to deliver the different kinds of inorganic waste in the best performing way i.e. as secondary raw material, the best performer manages not to make it a cost but to generate value from it. I can envisage two types of solutions: separating&Scouting the best way to reuse the material, and reduce the quantities by design. However, it is a responsibility of the whole supply chain. For Granarolo, nr. 1 inorganic waste source is 37% carton and paper; they can not be reused, one solution could be to substitute it with plastic reusable materials; nr. 2 is wood pallets and n. 3: 8% plastic they go to recycle or reuse plants.

Moving to another part of the value chain, the word to Giulia Tonoli, from Società Agricola Fratelli Tonoli which is a farm with approximately 800 cows located in Fidenza and producing Parmigiano Reggiano. Their strategy is to minimize waste production and always trying to innovate. The types of inorganic waste they deal with are seed packaging; medical stuff; tubes for irrigation but they reuse them.

As for medical stuff the farm tries not to buy small quantities but large containers so as to reduce the waste produced. About organic waste, they separate liquid and solid part of organic waste. It is important to quantify benefits from the economic point of view and to understand future trends to see whether the solution is sustainable.

María del Sol Cuenca Martín details the situation for horticulture. In this sector, the main inorganic waste is plastic used to cover the greenhouses. Several years ago a new policy was implemented in order to substitute plastic with cotton. Much smaller amounts of plastic waste are produced from fitosanitary products, or small pots.

For the meat sector, Yvan Deloche can add that packaging is a big issue for the meat value chain. The packaging which is used is soft plastic so it is difficult to recycle it. Solutions and costs for treatments are very high.

Then the discussion moves to the possible solutions to this problem. The experts are asked what can innovation bring (eco-design, packaging, different business models, or for example pooling systems).

According to Granarolo the first point is to reduce the quantities, by e.g. develop ecodesing, you must convince your colleagues of the marketing side to have appealing packaging. They have developed a tool to evaluate the LCA impact of the packaging . A cultural revolution needs to take place on the side of the consumers, the solutions to reduce food waste sometimes imply an increase of packaging (e.g. reducing portions). Also, the evolution of the regulatory aspects may imply the production of new packaging materials for e.g. purposes of traceability. In my opinion we should focus on bioplastics, biodegradable plastic, compostable plastic coming from agriculture and food waste, currently costing two or three times more than fossil plastic but which is the future.
From the point of view of Giulia Tonoli, within their activity there is no use of packaging or labels, mostly the waste production occurs at the consumer side. One possible solutions is to buy milk and buy from plastic bottles you can go with a refill. No technological solution but a “business model” solution.

As for the horticultural sector in Andalucia: one of the main problems in horticulture in order to substitute materials in the horticultural sector, are material properties are important: resistance and durability. The answer is bioplastic, but research should focus on developing different types of bioplastics as well as on exploring the use of natural fibers can be a solution.

For the meat industry, in PACA, multimaterial packaging is difficult to recycle but packaging designed in an easier way that allows recycling. According to the companies it is also necessary to define a standard for recyclable plastic. Another issue for the meat sector is to improve the sorting.

The last question is whether the participants can share a best practice could be for reducing inorganic waste. Granarolo: Pallet standards are not defined, how to manage broken pallets is a challenge.
The simplest and less costly solution should become a best practice.
Clust-ER Greentech suggests to act on communication, making people more aware and responsible of the link between their behavior and the environmental impacts.

Clust-ER Agrofood indicates that digitalization has a high potential to create higher interaction between producers and consumers in the wine sector. This implies reducing food waste. Education is important, as well as multistakeholder collaboration to favor industrial symbiosis and the circular economy.

Conclusions from the focus group

The sector experts highlighted many non-technological barriers such as standardization, the economic sustainability of switching to bioeconomy. These will need to be addressed in order to move to a sustainable zero inorganic waste food sector.

Project partners will perform the same exercise at local level to provide feedback for the deliverables that has to be delivered at the end of july.

Annex 2: Meeting with Coexphal as horticultural sector expert, Almerìa, 20/06/2018

Minutes of the meeting with Coexphal as horticultural sector expert within Reinwaste project, IFAPA La Mojonera, Almería, June 20,2018

Participants:

Mª Carmen García (IFAPA)
Jan Van der Blom (COEXPHAL)
Francisco Guillén(COEXPHAL)
Mariana Lorbach (AGAPA)

On-line participant:

Rosana García (AGAPA)

This meeting was held to complete the contributions of the horticultural sector expert COEXPHAL in the context of the Interactive International Seminar held in Bologna last June 7, 2018.

1. Brief project introduction

An explanation of the REINWASTE project is given, describing its objectives, partners, methodology and timeline.

2. Coexphal role as associated partner

Coexphal is informed of its role as associated project partner under IFAPA. Its participation has 4 specific objectives:

- Answering, through this meeting, to the questions included in the Agenda of the seminar held in Bologna on June 7, to which Coexphal was not able to connect due to technical reasons.

- Participation in the Open Innovation Lab, organised jointly by IFAPA and AGAPA, with actors involved in production, marketing, consumption and management of products generating inorganic waste. It can be designed as a digital platform, or as a seminar or workshops, but this issue will be defined later. The period will be from September 2018 to December 2019.

- Participation in a regional or national workshop, that can be the same workshop organised for the Open Innovation Lab. The period envisaged is from September 2018 to December 2019.

- Involvement in the dissemination of the project and transfer of results. The period envisaged is from January 2020 to July 2020.

Besides, a generic collaboration, which consists on facilitating contacts from its members, is envisaged. This will enable to implement the pilot projects as they will provide the information

available about inorganic waste generated and they will help disseminate the project and its results.

3. Interview to COEXPHAL as an expert

The following questions raised in the seminar held in Bologna were answered:

What do you consider as main source of inorganic waste (I.e packaging, …) in your value chain (horticultural) and how it's currently managed?

This question is answered together with the following one: **Are there any data available on flow, amount and waste hierarchy?**

The following inorganic waste types linked to horticultural production under greenhouses are identified:

1. Plastic greenhouse covering and meshes. They are the most voluminous waste, produced of a think recyclable plastic, that generate 1t/ha and year approximately. This type of plastic is usually recycled in recycling plants.

2. Plastics for mulching. They are made from a thin plastic that is not sent to recycling plants as it is not profitable. Nowadays it is sent to landfills.

3. Plastic Phytosanitary containers. They are a relevant waste. There are two options to manage this phytosanitary waste:

- SIGFITO: Joint phytosanitary waste management system. Only those containers with SIGFITO logo can be sent to the associated collecting point (green points). Some cooperatives are collecting points for SIGFITO. Most are associated to SIGFITO but not all of them. SIGFITO publishes Year Reports that quantify this waste.
- There is another system, a deposit and return system, but it is not being used nowadays.

4. Non-phytosanitaries products containers (fertilizers: sacks of fertilisers, large cans, etc.)

Fertilizers' containers are not admitted to the phytosanitaries circuit and there is no specific system for collecting and processing them.

5. Raffia. Nowadays conventional raffia is an important problem in compost plants, as farmers do not separate it in the farm and it is very difficult to separate it afterwards. Non purified raffia cannot be recovered.

6. Beehives and insects containers, sticky traps. Beehives are the most important waste of this group, in which organic, plastic and cardboard materials are mixed, so the problem is the separation of materials. These materials usually end at the generic dustbin, or at best, in the yellow rubbish container.

Some data about the number of beehives waste per year are mentioned: just for tomato production, around 30,000 beehives are accounted.

For auxiliary insects containers, it wouldn't be a problem to produce them from biodegradable materials.

7. Harvest and growing plastic containers. They are made from thick plastic that could be produced from biodegradable material. Returnable and non-returnable boxes are used.

8. Hydroponic and substrate sacks. Substrate is not a problem as waste as it is basically made of coconut fibre, which is organic, and perlite which is used to improve soil texture. Sacks are made of plastic. Hydroponic cultivation is used in 10-15% of Almeria province area.

9. Fertirrigation systems. They are made from rigid plastic, with longer or shorter lifespan, depending on the element: pipes, nozzles, mixing tanks, etc.

10. Seed trays and covers. Trays return to the seedbeds but the problem is when they have to be discarded. It is a problem because of the type of material: expanded polystyrene. For polyethylene covers, they are thrown away in conventional dustbins.

What do you consider "Innovation" on inorganic waste (i.e. eco-design, prevention, reduction, bio-economy) in your value chain? Would you give examples of best available technologies?

The following inorganic waste management processes and technologies are identified here:

- Transformation of mulching plastics into fuel through high temperature.

- Use of biodegradable raffia. Although it is already being used, it is not highly established. It is viable for all crops, except for long life tomato.

- Adding components to covering plastics in order to increase their durability and reduce the quantity of waste generated.

- Reuse of containers with resistant materials that allow sanitation.

- Recovery of plastics to generate energy through burning, provided their components do not generate toxic gases.

- Green manuring and using its own composting as they indirectly help to recycle and/or reuse raffia, as these practices force the separation of raffia when cultivation starts.

- Reduction practices: For instance, reuse of raffia for two years instead of one year.

- Use of biodegradable plastics

- Plastic recycling

- There has been an attempt to recover broken seed trays for energy production through a cement company, but this material is not interesting because it is too voluminous and has few caloric value (therefore, this solution must be discarded).

Are there any non-technological barriers for their adoption (i.e. lack of interest from the agri-food operators, trust on them, …)

- One of the most important problems in the inorganic waste management is logistics: how to pick up plastic profitably, not only from an economic point of view, as well as its preparation and previous stock in the farm. Besides, there are few points of delivery for this waste.

- More simplification of the legal framework for inorganic waste removal and management is needed. It is also necessary to unify different types of waste management in order to make managers and farmers more efficient.

- Cooperatives are nowadays acting as a SIGFITO collecting point (only for phytosanitaries), but they are collapsed due to Non-SIGFITO containers. This fact has encouraged many cooperatives to abandon the SIGFITO collecting points system.

- A legal framework favouring or promoting the use of biodegradable materials is needed. For instance, the use of biodegradable raffia in organic or integrated farming is not compulsory.

- There is an important market problem concerning plastic greenhouse covering absorption, that was mostly covered with China demand. Nowadays a change in China's law has closed this possibility. Therefore, stocking plants are full and farmers do not often have a place to bring their plastics.

- Farmers lack of awareness about their responsibility on waste management as well as a higher environmental and legal responsibility.

4. Other aspects discussed

Coexphal recommends to contact Fernando Estrada, as well as companies doing recovery of mulching plastics in PITA, and Carlos López from SOTRAFA.

Contacting the Townhall of El Ejido is also suggested in order to find out how “conventional” waste is managed by farmers, as well as to find out which are the authorised inorganic waste managers (Provincial Office for the Regional Ministry of Environment).

IFAPA raises the following doubts on the project scope:

- Are phytosanitaries’ containers included in the project?

- Can the use of biodegradable raffia be considered as a BAT? It is a product that is already in the market but it is still under development as it has to be improved a lot. There is a doubt about this because nowadays there is an agri-environmental aid that grants funds to farmers for its use.

Annex 3: Reinwaste experts group, Marseille, 18/07/2018

Projet cofinancé par le Fonds européen de développement régional

REINWATSE EXPERTS GROUP
Launch meeting
Wednesday, July 18, 2018, from 10am to 12pm, Marseille

Minutes

Participants :

- **Claude BAURY,** Water Quality and Environment Manager, CA13, Aix
- **Christelle DEBLAIS,** Circular Economy and Waste Project Manager,-PACA REGION
- **Yvan DELOCHE,** Environmental Technical Advisor, CRITT Agroalimentaire PACA
- **Valentin FOURNEL,** Director Fresh and Grocery Division, CITEO, Paris
- **Serge GRAVEROL,** Plant Productions Pole Manager, CA 06, Nice
- **François GROËLL,** Project Engineering Cell Manager, CRA PACA, Aix

Remotly

- • **Catherine MONTROZIER,** Head of Business Economy Department, CA 05, Gap
- • **Christian CHARBONNIER,** Deputy Director, CA 04, Digne-les-Bains
- **Samuel FERET,** Associate Expert Research and Cooperation Team, CIHEAM, Montpellier
- **Jacques THEBAULT,** Director, IPC Clermont, Saint Beauzire
- **Christophe LAPASIN,** Secretary General, CELENE, Paris
- **Emmanuel GAUNY** - for Françoise GORGA, R & I Director, ANIA, Paris

Tour of the participants:

Christelle DEBLAIS: Circular Economy and Waste Project Manager, SOUTH PACA REGION
Territorial Development and Environment Branch of the SOUTH Region

François GROELL: Head of Project Engineering Unit, CRA PACA
Meat sector: chosen by the consortium but not preferred sector in PACA.
REINWASTE project partner

Catherine MONTROZIER: Head of Economy Department of the CA of the Hautes Alpes: accompaniment of farms: advisers who work on the recovery of agricultural waste: large meat sector in the department of 05.

Christian CHARBONNIER: Deputy Director, CA 04. Livestock sector: communication on recovery with ADIVALOR, support for breeders on short lines.

Samuel FERET: CIHEAM, Montpelier leader of the ECOWASTE4FOOD project fights against waste at all links of the food chain.

Jacques THEBAULT: Director of IPC Clermont, a subsidiary of the technical center of the plastics industry. Applies to all plastics IPC Clermont works on the circular economy and in particular involved in ecodesign projects.

Christophe LAPASIN, Secretary General of CELENE: inorganic matter problem: intermediate packaging, salting salt of the skins.
2 type of waste produced by companies:

- those produced on the site; and therefore with a direct control of their future: packaging of raw materials, process waste ...
- those produced at the consumer with indirect control; household packaging waste: ecodesign.

Claude BAURY, Pole / Quality Manager for Water and Environment, CA13.

Serge GRAVEROL, Head of Plant Productions Division, CA 06.

Valentin FOURNEL, Customer Department, CITEO's Fresh and Grocery Sector (formerly Eco (-packaging)): assisting producers on the packaging market, customer department, fresh sector and grocery store.

Emmanuel GAUNY, ANIA: national organization charged with defending the interests of the food industry. ANIA is a partner in the REINWASTE project.

Yvan DELOCHE, CRITT Agroalimentaire PACA: Technical Food Center, CRITT is also partner of the REINWASTE project, it will intervene on the transformation part of the food chain.

<u>Presentation of the Regional Plan for Prevention and Management of Waste by Christelle DEBLAIS</u>

With the law “Notre”: Waste competence goes back to the regions: this concerns all waste, whereas before only household waste and hazardous waste was their responsibility.

The region has therefore developed a Regional Plan for Prevention and Management of Waste (GD)

This plan contains:

1. **State of play and census of management units**
2. **Census of requests in prefecture and public and private projects**
3. **Prospective futures of 6 and 12 years**
4. **Objectives of prevention, recycling and recovery of waste and planning**
5. **Limits to annual elimination capacities**

The plan will be approved next year: a lot of cooperation work with local authorities because they are in charge of waste collection.

Some numbers
In the South region: 21.5 million tons of waste:
of which 5.9 million tons of non-hazardous waste (green waste included)
of which 4 million tons of economic waste, DAE (= waste of enterprises)

- It is estimated that 40% of the economic activated waste goes with the collection of household waste.
The Region is working more and more with the professional sectors because the waste of economic activities represents important tonnages. In addition, this waste is still poorly known. To better know the quantities of waste from businesses that are not collected by the communities, the Region is in the process of drafting a call for tenders for a study.

Objective: Valorization (energy and materials) of 65% of non-hazardous non-inert waste (DNDNI) in 2025
How for AEDs:
- promote the implementation of the 5-stream decree
- develop new recycling streams
- Operation with chambers of commerce and rooms trades: Eco challenges to reduce

Other actions of the region on waste:

"Fili-déchets" project call:
Project support at regional level (with ADEME): 30 to 60 applications each year. Fili-déchets will be relaunched on September 10, 2018: objective: prevention and new recycling channels.
Budget: € 2 million
Amount of aid: from 5 to 100 K € / projects
Criterion: companies established or going to settle in the region.
Example: recycling of road beacons, dismantling of PV solar panels.
On November 5, 2018, the region organizes a day dedicated to the presentation of these projects.

Fight against food loss and waste (with ADEME) °: will be renewed in 2019. There are few projects submitted by food processing companies.

SMART WASTE Life Project: starting on 01/01/2018: integrated project with 18 local authorities.
The objectives are :

- to guide waste prevention and management towards an innovative, sustainable and inclusive circular economy
- to develop the territorial dynamics to reduce waste and develop circular economy

ECOWASTE4FOOD project: 2nd year of the project, including 6 regions and one city (Ferrara in Italy)
Objective:, identify, and discuss good practices in the fight against food waste.
For this organization of cross visits in different regions.
Example of valuation of coffee grounds in the UK and France, gleaning in Spain and France.
Finding: difficulties in identifying upstream innovations at the food processing stage.

Note from C. LAPASIN:
A circular economy project on Sisteron co-composting blood / green waste met strong local opposition. The realization of the projects is therefore sometimes complicated and it may be necessary to make pedagogy on these projects.

In the field, there is also sometimes an "overclassement" of waste by the administration. This can be a drag on their valuation.

Region only has waste jurisdiction for 18 months. Locally, there are houses in the region in different cities, with specific agents on the waste theme.
The Region is very in touch with the local authorities and wishes to develop partnerships on the topic of waste, and in particular work on the reduction of waste.

Presentation and exchanges on the REINWASTE project:
Reduction of inorganic waste
Duration: 30 months, February 2018 to April 2020.
Budget € 2,499,304 to finance the working time and support for project leaders
30 test pilots including 15 agriculture, 15 in the food industry
5 open innovation laboratories
3 regional action plans
The project concerns the meat industry in France

WP1: project management
WP2: project communication (responsible: CRITT)
WP3: definition of flow analysis methodology
WP4 transfer methods

See with Federation of Commerce and Distribution to be associated?
Support on projects identified to respond to AAP

Meat sector: PACA
Horticultural sector: Andalusia
Dairy Products Line: Emilia Romagna (Italy)

Waste collection:
S. GRAVEROL: There is a problem of access to certain farms in mountain areas: sometimes even the landers do not pass.
In horticultural production, the presence of Xelia bacteria will force farmers to put protective nets on their crops. This generated very large quantities of inorganic waste when it was replaced.

C. BAURY: What is the perimeter to take into account?
See the different types of farms: Sheep, cattle, Camargue bulls, poultry, pigs ...
at the farm level: whole farm.
Answer: a priori include all production tools and inputs that could generate inorganic waste.

Y. DELOCHE: Are we aware of the quantities of packaging put on the market for the meat sector in SUD region?

V. FOURNEL: CITEO has a national vision of packaging put on the market by its nationals, but no regional data or sector. See with C. LAPASIN if there is data for the meat sector.

See if it is possible to share good practices with companies: ex Bigard.
V. FOURNEL: CITEO knows the nature of packaging materials put on the market: plastic, cardboard, glass ... but not the details of the resins used for plastics.

The SOUTH region is in contact with the FCD, and will sign an agreement (content of this convention to be specified).

By 2022: with the extension of the sorting instructions, all packaging will end up in the yellow bin. The challenge is to make recyclable all flows that will end up in it.
One of the axes is the development of mono-material packaging in PE or PP.
Objective: to understand what is on the market and make recommendations.

In ecodesign, most of the work has been done on lightening.
2 other areas of improvement are recyclable or biodegradable packaging.
The focus will be more on recycling.

J. THEBAUT raises the problem of dyes and pigments, which disturb the sorting machines.
V. FOURNEL cites the example of carbon black.

At the agricultural level: in the AURA region, the Barbier companies; recycles agricultural films.

Materials development:
J. THEBAUT: ecodesign is more in the hands of suppliers, IPC Clermont has just completed the ecodesign of meat trays with comparison of PE / PET trays.
Problems to take into account: conservation, peelability. Today, PET trays pose conservation problems.
Expanded PE is still the best solution for weight reasons, even if it is not recyclable.
The PP could be interesting because it has prospects of recyclability.

Issues and projects for trays:

- The challenge for PET / PP trays: how to integrate trays flows with existing bottle flows.
- More problem on detection in sorting center: carbon black disrupts the sorting.

Current call for projects with catering companies: Objective either suppression or substitution of carbon black.
Fleury Michon project on carbon black substitution. The main drag on current solutions is the cost that is too high.

- FICT project for the passage of trays in mono materials: Problem on the opercules so that they are not disruptive for sorting.

CITEO on-site experience feedback form: https://www.citeo.com/news/rd-recycling-plastic-packaging-progress

OPTIGEDE: ADEME website: lists all projects supported by ADEME. : http://www.optigede.ademe.fr/

Biobased

- BioPET: some solutions launched on bottles for big companies.
- Bio PP: a priori does not exist yet
- BioPE: yes but not used for trays.

Biodegradable or compostable packaging:
Problem, only 2 to 3M inhabitants have access to a bio waste collection.

The chambers of agriculture are also interested in the issue of finished product packaging due to the development of short circuits by some breeders.

An ongoing study on plastics (content to do with Christelle DEBLAIS).

Packing in meat is not limited to trays, we also find soiled films from the packaging of raw materials. Before some of these films were sent to China for recycling.

The collection ADIVALOR is not necessarily well deployed throughout the territory.
House of Agriuculture 04: agricultural part: ADIVALOR see concern recycling sector:
Potential improvements:
- Mobilization of waste deposits
- Guarantee and traceability of material recycling ("escape" problem of nets and other plastics that are recycled in China).
There is an ambiguity between the sectors organized as ADIVALOR and the recovery of plastics by local authorities who take the opportunity to tax agricultural activities.
Shared statement on 04 and 05.

V.FOURNEL: all companies pay a contribution, donated over 90% to local authorities: traceability.
The costs of the packaging waste treatment channels are distributed as follows:

- 50% by companies put on the market (via contributions to eco-organizations)
- 20% community
- 30% resale of materials

Website of all eco-organisms are available on ADEME website.
New sectors will be set up in the coming years: mobile homes, toys, boats ...

IPC Clermont works on recycling of complexes: example recycling of films based on EVOH
Need to define the material quality: example of agricultural films: need of washing circuits.

Glossary :

CA : Chamber of Agriculture
PE : Polyethylene
PET : Polyethylene terephthalate
PP: Polypropylene